



@NUSTZIM



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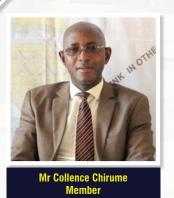


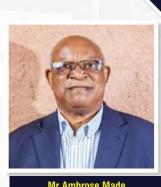




Eng Irene Kamutero Member









Ms Siphathisiwe Maisiri Member

NUST PROFILE AND CREST

BACKGROUND

The National University if Science and Technology (NUST) is located in the warm and friendly City of Bulawayo, South West of Zimbabwe. The City is well served by road, rail and air transportation, with direct flights linking the city with Harare, Johannesburg and Victoria Falls.

The University was established by an Act of the Zimbabwe Parliament of 1990. It opened its doors 270 pioneer students in April 1991. On the 28th of October1991 the University installed its first Chancellor, and its first Vice-Chancellor. The event coincided with the laying of the Foundation Stone of the Institution.

On the 27th of May, 1995, NUST held its first Graduation Ceremony whereby 163 pioneer graduates from the faculties of Applied Sciences and Commerce were capped. The University has since grown to seven faculties. The other five faculties currently in existence are the Faculty of Industrial Technology (FIT), Faculty of Built Environment (FOBE), Faculty of Communication and Information Science (FCIS), Faculty of Medicine (FM) as well as the Faculty of Science and Technology Education (FSTE).

The University has more than 43 teaching departments that all together offer at least 73 undergraduate programmes. At the post-graduate level, the faculties have produced hundreds of graduates at the taught Masters and the Master of Philosophy programmes. The faculties of Applied Science, Industrial Technology and Commerce have also graduated many at PHD level with many more on stream. This is supported by the availability of highly qualified supervisors.

VISION

To spearhead human capital development for industrial and socio-economic transformation through Science and Technology based solutions.

MISSION

To spearhead human capital development for industrial and socio-economic transformation through Science and Technology based solutions.

CORE VALUES

In the delivery of value to our clients:

We pursue academic excellence with integrity, honesty and ethical behaviour.

We are committed to responsible research and innovation that drives commercialisation and industrialisation. We thrive on mutual respect, teamwork and effective partnerships.

We are driven by a passion to fulfil your career dream.

MOTTO

"Think in other terms"

STRATEGIC DIRECTIONS











THE UNIVERSITY CREST



INTERPRETATION

Colours

White – Facts and Figure

Red – Intution/gut feeling

Green – Creative Thinking

Yellow – Positive Assessment

Blue – Control of thought process

Black - Pragmatism/Reality

Symbols

🤐 Star – Rising Sun

Bird – Zimbabwe

Scroll – Programmes/ Qualifications

Cap – Knowledge

Telescope – Looking into the future

Wall – Industry

Shield - Protection

PRINCIPAL OFFICERS OF NUST



Prof. Eng. Mqhele Dlodlo Vice-Chancellor



Dr. Gatsha Mazithulela Pro Vice-Chancellor Innovation and Business Development



Dr. Nduduzo Phuthi Acting Pro Vice-Chancellor Research and Academic Affairs



Mr. Fidelis Mhlanga Registrar



Ms. Katherine Matsika Librarian



Dr. Fortune S. Nkomo Bursar

Communication and Marketing Director: Felix Moyo

EDITOR



he sands of time have fallen and yet another year has drawn to a close. It appears as we grow older and wiser time seems to move faster and faster. Indeed time does fly when you are having fun and even more when you are hard at work, passionately pursuing your goals. It is only at the end of the year that we can reflect on the time spent and bask in the glow of achievement or the wallow in the shadow of regret for opportunities missed.

Nevertheless as we reflect we can only feel gratitude for coming this far and being allowed to continue to forge ahead. The days afforded to us give us the opportunities to build on past successes or make right our past failures. This year has been one of immense endeavour and remarkable achievement. The University has taken great strides in once again asserting itself as the benchmark for innovation among tertiary institutions in Zimbabwe. In this past year of 2019 NUST successfully undertook a number of projects and initiatives that both on and off campus. We express our appreciation to all the staff and students involved in our different faculties, departments and appendages involved in bringing us continued success.

2019 was also a good year for our students. We saw more students entrust their futures to our esteemed institution this year than last year. 2019 also saw more students be rewarded for that trust at our graduation. We even had students graduate as pioneers of our new Bachelor of Science Honours Degrees in Midwifery and Animal Science that were in collaboration with Gwanda State University and the Bachelor of Technology Honours Degree, which was in collaboration with Mutare Polytechnic.

Much has been done, much has been learnt and much is yet to come. With that being said, I invite you to read about it all in this year's Vice-Chandellor's Annual Report. Enjoy.

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Vice-Chancellor: **Prof M Diodio**

THE VICE CHANCELLOR'S MESSAGE



The new Nust Gate house which was constructed with the help of PPC

F ever a year demanded clarity and sharpness of vision, surely it was The University is 2019. Not only because it came on the dusk of yet another decade, but it required that NUST strikes the right balance between student education and business development with each reinforcing and supporting the other, in line with the new thrust of Education 5.0. This is no mean task but I am happy to report that we are making good progress.

NUST aims to create the best possible environment for students, staff and the community but of course we have to be conscious of the external environment and be ready to respond to changes in policy and the economy. After assessing both the internal and external risks through our Strategic Planning process, we took steps to improve efficiency and reduce costs

where necessary to set the University on a developmental trajectory. We continue to inspire students and staff to be the best they can be through innovation, education and research.

brimming with new, world-class ideas. Let us collectively work together to turn these ideas into reality and build the NUST of tomorrow.



The Minister of Higher and Tertiary Education, Science and Technology Development, Honourable Pro-trophy for the best research fessor Amon Murwira (right) shakes hands with Prof. Ramjee Prasad during the launch of the Core institution of the year 2019 TeleInfrastructure Global Capsule NUST division (CGC NUST, Zimbabwe) while Vice-Chancellor, Prof at the Public Sector Manage-Mghele Dlodlo follows proceedings.

The launch of the Core TeleInfrastructure Global Capsule NUST division (CGC NUST, Zimbabwe) by the Minister of Higher and Tertiary Education, Science and Technology Development, Honourable Professor Amon Murwira, was one of the highlights of the year under review. CGC NUST, a first of its kind in Africa, is a division that aims to spread global research network into the continent.

The NUST brand was visibly shown within and beyond the borders. NUST scooped the ment Award Ceremony. Also,

the ZITF Bronze Medal for the Best Exhibition in the Education and Training category is clear acknowledgement that NUST is a force to reckon with in the market. No wonder our enrolment figures during the year under review surpassed those of the previous year. The University projects that were exhibited at ZITF 2019 caught the attention of various organisations. The highly

innovative projects include the Infectious Diseases Incident Mapping; Low Cost Solar Powered Traffic Lights; Vending

Stalls Urban Regeneration; Paper Production from LUFFA Sponge and Corn Husks; Anti-Bacterial Soap from Paw paws amongst others. The challenge in the year ahead is to turn these innovations into commercial businesses.

NUST takes pride in the quality of our students and graduates. Two of our students came first in the ZIMCODD Tertiary Institutions Debate Competitions in Harare and successfully represented Zimbabwe in Tanzania, where they won two Gold Shields as First Prize Awards. In another honour, NUST students were the only ones selected for the United Nations Academic Impact Millennium Fellowship and they did very well in the programme. The NUST design team in the preparation for the 2020 World Exposition (Expo 2020 Dubai) came first in the global competition.

NUST takes pride in the quality of our students and graduates.

To increase collaboration among NUST researchers, four clusters were formed in 2018, and three of these – Climate Change Cluster, Rural Livelihoods Cluster and Statistics Cluster – were very active and vibrant during the year under

Vice-Chancellor, **Prof Mqhele Dlodlo** officiates at one of the functions held to recognise students' achievements while the Librarian, **Ms Kathy Matsika** follows the proceedings.

review. Efforts are being made to bring to life the Small to Medium Enterprises Cluster.

To increase collaboration among NUST researchers, four clusters were formed in 2018, and three of these – Climate Change Cluster, Rural Livelihoods Cluster and Statistics Cluster – were very active and vibrant during the year under review. Efforts are being made to bring to life the Small to Medium Enterprises Cluster.

The University continues to forge in depth relationships with selected institutions. During the 2019 Graduation Ceremony, His Excellency, the Chancellor of NUST, President Dr. Emmerson D. Mnangagwa, officially opened the new-look state-of-the-art NUST Gatehouse that has changed the face of campus. Thanks to our partner, PPC Zimbabwe. He also officially opened the doors of the NUST Innovation Hub, the centre for all our innovations and

inventions.

I feel very privileged to be the Vice-Chancellor at NUST, a University with a lot of potential. I will continue to lead the University to the best of my ability and do everything I can to unlock all doors of innovation and development. I pay tribute to the commitment, creativity and sheer hard work of all staff, students, alumni and other stakeholders, without whom none of the achievements described in the report would have been possible. I also extend my appreciation to the NUST Council for their guidance and wise counsel.

The University is brimming with new, world-class ideas. Let us collectively work together to turn these ideas into reality and build the NUST of tomorrow.

Prof. Eng. Mqhele Dlodlo

COMMUNICATION AND MARKETING



Communication and Marketing Director: Felix Moyo



2019 Graduation ceremony which was held at the NUST sports ground.

Introduction

his report presents the Communication and Marketing (COMA) Department's achievements and shortcomings against the goals for the year 2019, as we sought to align to the University's Strategic Plan 2019-2023. A monitoring and evaluation perspective is given, to assess whether COMA is on track towards building, protecting and maintaining the NUST brand. The report outlines the Strategic Direction, the Department's Objective and the activities done towards achieving these.

Staffing

The year 2019 closed with a staff complement of 12 after the transfer of one commissionaire and the resignation of the Department's Messenger. The post of Alumni Officer was transferred to the office of the Pro-Vice-Chancellor, Innovation and Business Development. The Department is also in the process of restructuring to respond to the strategic needs of the University.

Achievements

The Zimbabwe International Trade Fair being the mother of all exhibitions in the country, is a key platform that the Department endeavour to utilise to market the institution's research output, degree programmes and show the country NUST's capability in participating in the industrialisation of the economy. As such, the COMA Department led the team of both staff and student researchers in scooping the ZITF Bronze Medal for the Best Exhibition in the Education and Training category. This keeps the NUST brand visible and NUST is acknowledged as a force to reckon with in the market.

Projects that were exhibited, and attracted the interest of various organisations include the Infectious Diseases Incident Mapping; Low Cost Solar Powered Traffic Lights; Vending Stalls Urban Regeneration; Paper Production from LUFFA Sponge and Corn Husks; Anti-Bacterial Soap from Paw paws amongst other highly innovative projects.

Schools Liaisob Programme

The Schools Liaison Programme was rippled most of the year, owing to the economic challenges

This report presents the Communication and Marketing (COMA) Department's achievements and shortcomings against the goals for the year 2019, as we sought to align to the University's Strategic Plan 2019-2023.

which affect resources availability for the team to conduct these programmes. As such, of the 10 provinces that should be covered, the Career Guidance Team only visited a total of fourteen (14) schools, while seven (7) schools visited NUST campus and had a Career Talk with the team. The Career Guidance Team also fully participated in Open Days organised by the various academic departments by engaging with prospective students and sharing information on NUST degree programmes. The team is always eager to reach out to communities, urban and rural with the sole purpose of taking NUST to the people that they may be informed.

Media Management

The Department maintained close links with the local media, who are our main stakeholder with regards to brand management and development. The media was invited to provide coverage of all NUST events and ceremonies with the goal of ensuring the public is kept abreast with activities happening at NUST. Few misunderstandings arose with regards to getting a factual story about an incident at NUST, thus ensuring that the NUST image was constantly upheld. The call remains to actively engage the media and further strengthen our relationship, and where possible enter into partnerships of mutual benefit which will further enhance the visibility of NUST in the media agenda. In response to the market, the department is currently available on social media platforms: Facebook (@NUST.ZIM), Twitter (@nustzim), Instagram and YouTube. This is to ensure that NUST reaches its target market and is able to interact with all its stakeholders in real-time. Our platforms are not only authentic sources of information, but are highly interactive as followers' inquiries are attended to and advice is given as required.

Graduation Ceremony

The annual Graduation ceremony has proved to be the climax of our activities as a university, and particularly as a Department. This is where the Department takes the lead in advocating that all processes are well coordinated, timeous, hassle-free and a joyful experience for the graduand of that year, as well as a refreshing event for our corporate and government stakeholders. The graduation day was three-in-one event where His Excellency graced the official opening of the NUST Innovation Hub, the NUST Gatehouse and presided over the ceremony itself. The highlight of the 25th Graduation Ceremony held on the 9th of November 2019 was the conferment of His Excellency, the Chancellor of NUST, Dr Emmerson D. Mnangagwa with an Honorary Degree, a Doctor of Philosophy in Education, which Ceremony the Department organized and executed much to the guests' acknowledgement. COMA provided support on the protocol and overseeing the organization and running of these events as they had a huge bearing on uplifting the NUST Brand. The Harare Office actively participated in the preparation for the graduation ceremony. On behalf of the Vice Chancellor, the Communication and Marketing Officer attended graduation ceremonies at The Zimbabwe Defense University, Bindura University Of Science Education, TelOne Training Centre, and Chinhoyi University of Technology.

University Shop

Owing to the unfriendly economic climate, the University Shop could not attract viable suppliers that would stock up with products necessary to push the NUST brand. This resulted in the shop remaining idle for the better part of the year, with only a few leather handbags available. As such, the Department will engage the Innovation and Business development Office to develop a viable business model that will see the shop running independently towards being a strategic business unit.

Fundraising

The department's fundraising efforts were crippled by the predominant economic environment. Support was received from a few companies, which included Pretoria Portland Cement (PPC), Calm Health Medical Aid, and Old Mutual. These corporate partners have proved to be our all-weather friends who have fully supported NUST projects when requested. In that vein, the completion and subsequent opening of the NUST Gatehouse, sponsored by PPC was proof of a long-standing relationship that the department established with PPC.

In response to the market, the department is currently available on social media platforms: Facebook (@NUST. ZIM), Twitter (@nustzim), Instagram and YouTube.

Publications

The University's annual publications, i.e. the Vice-Chancellor's Annual Report and the Study @ NUST Prospectus were published as online versions on the university website and were also available as PDF shareable copies for wider dissemination. The Graduation booklet was also produced in time for the Graduation ceremony.

Conferences

The Director attended two international workshops in the year 2019. One was organized by the Association of Commonwealth Universities in Kenya, whilst the other was convened by SANORD in Botswana. Attendance of such meetings

helped the Department to keep-up with international trends in the communication, public relations and marketing field.

Harare Office

In 2019 the Harare Office worked with all the departments variously towards the attainment of the strategic goals. The office strove to continuously increase awareness, visibility of the university through forging synergies and crating partnerships that work to promote the mission and vision of the institute. The year witnessed overwhelming numbers of applicants visiting the office seeking to apply for both undergraduate and postgraduate programs. This was an encouraging start and sign that marketing efforts were bearing fruits.

Harare Office staff worked tirelessly with the Faculty of Communication and Information Science in hosting a breakfast meeting at a local hotel in Harare. The meeting was held under the theme "Evidence Based Governance Powering vision 2030". Our guest of honour was the Minister of Public Service Labour and Social Welfare, Dr Sekai Nzenza. The office liaised with companies and organizations that sought after NUST students for industrial attachment: UNESCO, IPEC, Proplastics, CBZ and CABS to name but a few. The Faculty of Built Environment successfully held a one-day symposium at Zimdef House with Harare office assisting with logistics. The seminar held under the theme "Earth Building" had local and international participants. The office also continued to efficiently execute tasks as assigned by different departments: selling tender documents, liaising with council members based in Harare, processing travel visas for staff members at different embassies and work permits for foreign lecturers.

Functions/Meetings/Seminars

The Communication and Marketing Officer attended the following functions:

- Strategic planning workshop organized by NUST at a local hotel in the city of Bulawayo
- joined other guests at the launch of the India-Africa Incubation Centre in Harare. The centre was official opened by His Excellency The President of Zimbabwe, Cde E.D Mnangagwa.
- attended the Public Sector Management Award ceremony. The function was held at a local hotel in Harare and was organized by Stallone Consultancy.
- joined other invited guests who turned up to celebrate the USA independent day. The event was held at the USA embassy in Harare.
- attended the 12th meeting of the Advisory Board of the Research Platform. The meeting was held at the French embassy in Harare.
- on behalf of the Vice Chancellor attended the launch of the "Public Entities Corporate Governance Act for State Enterprises and Parastatals". The event was held at a hotel in Harare.
- attended a ceremony at Zimgold Pure Oil Industries. The event was a handover of the masters scholarships programs namely MTech in Geotechnical Engineering and MTech in Mechanical Engineering.

Career Exhibitions

The Office received many invitations for career days from different schools but only managed to visit two schools due to challenges that will be mentioned in this report. Mhandarume High school in Chimanimani: The career day was organized by the Department of National Employment Services Division under the Ministry of Public Services Labour and Social Welfare. Cornelius Hope high School: The career day was organized by a local church. The school is church related and has students from local community but a big number from the church managed orphanage.

Notable Achivements

NUST scooped the trophy for the best research institution of the year 2019 at the Public Sector Management Award Ceremony. One of our graduates from the department of Industrial and Manufacturing Mr Sosten Magweva was given a scholarship to study in India's prestigious Institute of Technology Pakaard. The Communication Officer with the assistance of Faculty of Built Environment (FOBE) Harare resident lecturers engaged the Harare City Council (HCC) with a proposal for land for NUST in Harare. This initiative was well received by HCC and it culminated into a meeting between HCC and NUST senior management. By the close of the year under report, the process of acquiring land in Harare was at an advanced stage.

Challenges

Due to lack of a reliable vehicle, the Communication and Marketing Officer failed to visit schools for career fairs and also attend to many official events. The Harare Office needs four (4) new computers to replace the old ones that are currently in use in order to efficiently manage the increased workload. There is need for NUST to have its own premises in Harare. The first steps toward addressing this challenge were undertaken during the year. It is still a long way towards realizing this goal, it will need cooperation and support from all quarters of the university.

Director Centre for Continuing Education, Prof Stanely Mpofu

CENTRE FOR CONTINUING EDUCATION



Students helping an elderly during their Aged Care lecture.

Introduction

hrough the Information Technology (IT) Professional Development Short (PDS) courses Key Result Area, the CCE continued to meet and fulfil the education and training needs of the market. Buttressed by the institutional core value of client-focus as the cornerstone of the operations, the training accessed a total 1 155 participants through the multiple courses offered. This was in spite of the adverse market conditions, mainly inflationary pressures that beset the macro-economy throughout 2019, leaving the other Key Result Areas of Outreach/Community Scholarly Engagement, Online Learning, and Research and Consultancy struggling to come on stream. Nonetheless, despite the difficulties and mounting challenges, financially commendable achievements were realised. The mooted transfer of the NUSTSEC to CCE management still awaited full integration through offi-

transfer of the NUSTSEC to CCE management still awaited full integration through official communication from the Registrar. As a result, operations remained largely unchanged, pending receipt of appropriate documentation. Lastly, the anticipated 55 Jason Moyo campus

refurbishments materialised with the three CCE floors duly tiled.

participants undertook training in the various courses, 680 in IT and 475 in the PDS courses

Staffing

The staffing position changed with the resignation of the Centre's Instructor/Technician. Interviews were subsequently conducted for both the Technician and Assistant Technician posts, the latter of which was vacant and occupied on a part-time basis. Assisted by the CCE Secretary, two retired, part-time teachers took care of daily business at the NUSTSEC. Meanwhile, Dr Vincent Mnkandla's employment was extended to June 2020.

Training Courses

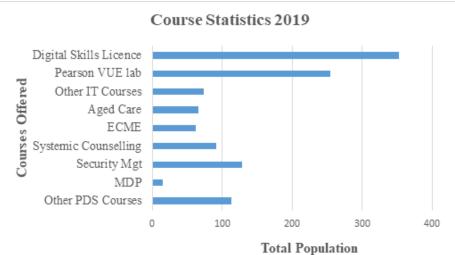
Figure 1 shows the overall course statistics and, therefore, performance during the year. According to the enrolment statistics, a record 1155 participants undertook training in the various courses, 680 in IT and 475 in the PDS courses. While varying with courses, the 51:49 gender ratio in favour of males sustained.

For the IT courses, the Digital Skills Licence (DSL) accounted for 352 participants, the Pearson VUE lab, 254, and Other Computer courses, 74. The lab figure was a most welcome development with regard to international certifications as a result of the 2018 Agreements signed, one, with the British Council for the online testing of Association of Chartered Certified Accountants (ACCA) and the other with the Institute of Chartered Accountants of Zimbabwe (ICAZ) for the Initial Test of Competence (ITC). Clearly, given market demand, business can only get better. In comparison to the DSL, the rest of the other IT courses that included Computer Systems

Support, Computer Network Support, Computerised Accounting, and Graphic Design, were lowly subscribed with a combined total of 74 participants.

Figure 1: Course statistics

From the range of PDS courses undertaken, the enrolment figure of 475 represented 41% of the total participant population, unevenly distributed among the management courses offered. Among the most popular were Aged Care IV, the Executive Certificate in Microfinance and Entrepreneurship (ECME), Systemic Counselling, Security Management and the Management Development Programme (MDP), with Advanced SHEQ Auditing, Leadership and Management, and Project Management among the other PDS courses offered.



Although with a small enrolment, yet distinct from the other courses, run in partnership with Old Mutual Zimbabwe Ltd, was the MDP, a 10-month online course conducted through the Moodle learning management system. The development was a milestone likely to set future trends on online delivery, as the facilitators, largely drawn from academic depart-

ments at NUST, proceeded to deploy the experience gained in their own courses and programmes. From the statistics, the massive IT-PDS performance augured well for the future. Given the upward trend, the PDS courses positively contributed to the Centre's rebound, with some of the courses not only registering two or more intakes, but also operating from both Bulawayo and Harare. The major missing component, and of concern, was the dearth of industrial courses, the backbone of the University mandate. Apart from the MDP, the general online training programme remained dormant with the lab used for other CCE courses.

From the statistics, the massive IT-PDS performance augured well for the future.

Outreach/Community Scholarly Engagement

Together with Research and Consultancy, the Outreach programme remained relatively subdued. Only a handful of the affiliates, namely, Lady of Fatima – Ingwegwe Primary School, Infohut and Rangemore Primary School undertook some training with a combined yield of 84 participants. Overall, enquiries for affiliate status by schools and private organizations continued, hopefully, to translate into successful contracts in future.

Receipts and Payments

The total receipts amounted to \$534,099.00 compared to \$111,847.00 in 2018.

The total receipts amounted to \$534,099.00 compared to \$111,847.00 in 2018, giving a comparative surplus of \$422,253.00 or 378% increase. The bulk of the receipts came from the PDS courses, \$432,395.00; IT courses, \$80,558.00, and Partners, \$27,027.00. Total payments stood at \$358,391.00, which was 67% of the total income, with the instructor/facilitator fees accounting for the bulk of the payments at a cost of \$187,958.00, generating a surplus of \$175,708.00 – an earning that was indicative of the impact of inflation and much less genuine currency gains. One net effect of the inflationary instability was how course fees became very difficult to manage, as figures became untenable as soon as they had been computed, hence, barely able to sustain operations. This justified frequent fees adjustments so that the quantum of service delivery approxi-

mated the set standard.

Conclusion

The drive to diversify partnerships and course portfolios to enlarge the client base as well as enhance the entrepreneurial value of the training was bearing fruit. The tiling of the three floors added the sparkle to the quality of the physical premises, promoting a conducive learning and training environment.

Future Plans

In terms of business, 2019 was quite positive with multiple course programmes translating into positive gains and benefits. In the midst of the harsh economic environment, the CCE stands ready to seize whatever opportunities to intensify its Strategic Plan initiatives and activities to realise higher rates of return in terms of both career and income capital. This means the plans must both maintain and enlarge the momentum so that the Centre retains its market advantage.

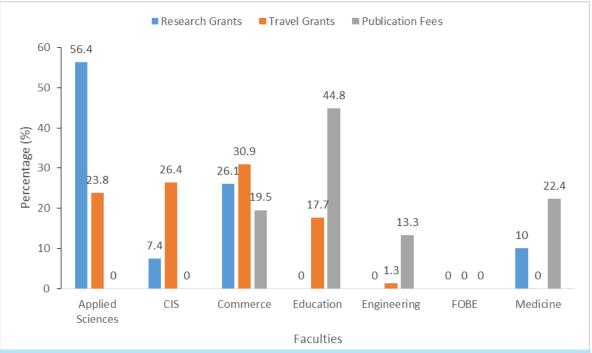
In particular is the need to expand the operational plan of the NUSTSEC which will involve setting up a computer lab for web browsing as well as upgrading the laboratory for practical lessons. Finally, sincere appreciation to the relevant Departments at NUST for the professional support and to the CCE staff members for commitment to duty.

Prepared by Prof Stanley Mpofu Director, CCE



Prof Yogi Naik

RESEARCH AND INTERNATIONALISATION OFFICE



Research activities per faculty during 2019.

Introduction

he Research and Internalisation Office (RIO), formerly Research and Innovation Office, was established in 2006. RIO is strategically placed in the Vice Chancellor's Office to enable it to deliver well on its mandates.

The responsibilities of the Office include:

- (a) developing a plan for NUST and developing a university wide and focused research culture and agenda for NUST,
- (b) identifying and exploiting alternative sources of funding for research conducted by NUST researchers,
- (c) building capacity in proposal development, project implementation, and report writing (including publishing in peer reviewed journals)
- (d) Management of the Research Board
- (e) Provide a platform for dissemination of research outputs in the form of journals- where researchers can submit manuscripts for their research outputs.

Staffing

In 2019, RIO had an establishment of three (3). The Office is headed by the Director who reports to the Vice-Chancellor. Other staff members of the office include a Chief Research Officer, a Research Administrator and a Chief Secretary. During the period under review the Office recruited one student (intern) on industrial attachment for a 12 month period. Their task is to disseminate the output of researchers at NUST.

Achievements

RIO hosted a number of workshops to improve the skills of researchers at NUST that are described below. In 2019, the attendance was good. Most workshops were attended by researchers in the Faculty of Applied Sciences and Faculty of Commerce.

Manuscript Writing Workshop

'Manuscript Writing' workshops were hosted by RIO 13th of May and the 18th of October 2019. Nine academic staff attended in May and twelve in October. The objectives of the workshop were to help participants to prepare and submit high quality manuscripts in peer reviewed journals.

RIO is strategically placed in the Vice Chancellor's Office to enable it to deliver well on its mandates.

The participants indicated that attending the workshop would greatly assist them to convert students' dissertations to journal articles.

Introduction to SPSS Workshop

RIO hosted workshops on 'Introduction to SPSS' from the 08th - 09th May and 16th - 17th October. The objectives of the workshop were to help participants to create data sets in SPSS, to analyze data using SPSS and to interpret SPSS

output. Though, participants said that the workshop content was very useful, they encouraged RIO to increase the duration of the course to two and half days.

The Seventh NUST
'Annual Research Day'
was held from the 20th
to the 21st of June
2019.

Research Ethics Workshop

RIO hosted a Research Ethics Workshop on the 07th of May. Eleven academic staff attended the workshop. The objectives of the workshop were to assist researchers conduct their researches in an ethical way and be aware of the ethics norms they are supposed to adhere to.

Literature Databases Workshop

RIO and the NUST Library organised and ran a workshop on 'Literature Databases' on the 14th May and 21st October in the NUST Library, Electronic Resources Centre. The objectives of the workshop were to (i) Strengthen the knowledge and skills required for the effective use of electronic information, and (ii) To encourage greater use and increased impact of electronic information resources. At the end of the workshop, the participants indicated that attending such a workshop was going to increase their usage of electronic databases in the NUST library.

Preparing Conference Presentations Workshop

RIO hosted a 'Preparing Conference Presentations' workshop on the 06th of May and 15th of October 2019. The objectives of the workshop were to help participants to present their research output at scientific conferences either through posters or power point presentations. Participants suggested that future workshops should incorporate group work and plenary sessions.

Annual Research Day

The Seventh NUST 'Annual Research Day' was held from the 20th to the 21st of June 2019. Fifty one abstracts were received from all the faculties at NUST except FOBE and CIS (see Table 1 below). Thirty of the abstracts were accepted for presentation. Among the 31 presentations, 12 of the presenters were grantees sponsored by the Research and Development Board to travel to and present at Regional and International Conferences. The remainder were presenters who responded to the call of proposals. The research areas covered a wide range of topics from improving rural livelihoods, finance, health and water and sanitation.

Table 1: Number of Presentations at the NUST Research Day per Faculty.

For each faculty monetary prizes (sponsored by the Research Faculty and Development Board) were awarded to the presenters in the junior and senior categories. The judging panel included the Deans of the 7 Faculties (or their nominees).

Applied Built En Comme

Structured Training for African Researchers Workshop

RIO hosted an adapted version of the Structured Training for African Researchers (STARS) programme from the 2nd to the 6th of December 2019. The STARS programme comprises of 9 modules that were developed by The Association of Commonwealth Universities (ACU) to assist Early Career Researchers (ECRs) in Africa. The workshop was attended by thirteen participants from the Faculties of Applied Sciences (5), Built En-

e 1		Presentations	Co-authors	came to listen)
	Applied Sciences	17	19	08
е	Built Environment	00	00	00
	Commerce	05	11	07
	Communication and Information Science	00	00	00
	Engineering	04	04	06
r	Medicine	01	02	04
е	Science and Teacher Education	04	04	03
)	Library			03
1	Student Affairs			04
-	ICTS			07
S	VC's + Registrar's Office			08
-	Total	31	40	50

Number of Number of

vironment (1), Commerce (4), Communication and information Science (2) and Engineering (1). Nine modules were covered during the workshop. The modules covered areas such as 'Identifying your research niche', 'Developing a research proposal and getting funding', 'Managing time at work and home', 'Networking', 'Publishing for academic and non-academic audiences', and 'Supervision of students'. Each module had a 60 minute video and written material. Discussion and sharing/learning experiences sessions followed after watching the video.

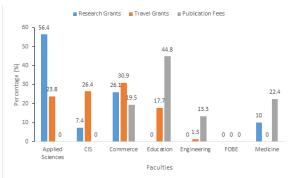
RIO hosted an adapted version of the Structured Training for African Researchers (STATS) Workshop.

Participants (who

Research and Development Board

In 2019, 51 applications were approved by the Research and Development Board in 2019. The total funds dispersed were RTGS\$187 624.87; RTGS\$57 384.03 was for Research Grants, RTGS\$28 910.74 was for Publication Fees and RTGS\$101 330.10 was for Travel Grants.

In 2019, the Research and Development Board approved 14 Research Grant applications. Seven (50%) were from female applicants and 7 were from male applicants. The Faculty of Applied Sciences (7) had the highest number of applications followed by the Faculty of Commerce (4), the Faculties Communication and Information Science (2) and the Faculty of Medicine (1). There were no applications from the Faculties of the Built Environment, Engineering, Science and Technology Education and the Vice-Chancellor's Office. In 2018, the Research and Development Board approved 27 Research Grant applications. Ten (10) were from female applicants and 17 were from male applicants. The Faculty of Applied Sciences (56.4%) was



allocated the highest amount of money, followed by the Faculty of Commerce (26.1) and the Faculty of Medicine with 10.0%. There were no applications received from the Faculties of the Built Environment, Engineering, Science and Technology Education.

A new journal to cater for Communication and Information Science disciplines, Southern Africa Journal of Communication and Information Sciences, is now in operation.

Travel Grants

The Research and Development Board approved 25 applications for Travel Grants. Twelve were from females and 13 were from male Applicants. The highest amount of funds were granted to the Faculty of Commerce (30.9%) followed by the Faculty of Communication and Information Science (25.4%).

Publications Fees

The Research and Development Board approved 12 applications for Publication fees. Eight (8) were applications from females and the 4 were from males. The Faculty of Science and Technology Education (44.8%) was allocated the highest amount of money and no requests were received from the Faculties of Applied Sciences, the Built Environment and Communication and Information Science.

Outreach Programmes

Zimbabwe Journal of Science and Technology

The journal is now publishing one issue per year. Each issue takes 15 papers. The major contributors are Zimbabwean authors, Nigerians, Swazis, Ethiopians, Tswanas, and South Africans. Under the guidance of Prof AH Siwela (Editor), plans to have the journal registered with African Journals online (AJOL) are gathering momentum.

Southern Africa Journal of Communication and Informaion Sciences

The new journal to cater for articles from authors in the Communication and Information Science disciplines is now in operation. The journal is now receiving papers and the first issue will be published in the New Year. The Editor of the journal is Dr Peterson Dewah.

Research Clusters

Out of the 4 clusters formed in 2018, 3 of the clusters were very active and vibrant in 2019. These were Climate Change Cluster, Rural Livelihoods Cluster and Statistics Cluster. The Small to Medium Enterprises Cluster was not very active, attendance to meetings by cluster members was erratic and very few members turned up for the monthly meetings. The research clusters were formed to increase collaboration among NUST researchers, so as to increase the quality and quantity of research output at NUST.

Challenges

The limited budget allocated to RIO hampers the engagement of more researchers so as develop their research skills. It is hoped that in 2020 there will be an allocation for training as well as subscriptions to databases offering funding opportunities.

Plans for the Future

In 2020 the RIO will a) Coordinate the establishment of an IRB at NUST; b) Spearhead the adoption of the revised Research Policy and Research Ethics Policy by Senate; and implement them and c) Coordinate the subscription to a

database offering funding opportunities and assist academic staff to apply for external sources of funding.

Other Activities

RIO coordinated the revision of the NUST Research Policy and the NUST Research Ethics Policy.

formed in 2018, 3 of them were very active and vibrant in 2019.
These were Climate Change Cluster, Rural Livelihoods Cluster and Statistics Cluster.



Pro Vice-Chancellor, Innovation and Business Development, Dr Gatsha Mazithulela

Pro Vice Chancellor – Innovation and Business Development



The Innovation Hub, which was officially opened during the year under review.

Introduction

he office of the Pro Vice Chancellor – Innovation and Business Development (PVC-IBD), has been in existence for the past eighteen months. Its primary mandate is to coordinate and drive the delivery of Innovation and Industrialisation by initiating, recommending, implementing and monitoring policies and procedures dealing with university business development.

Staffing

The departmental staff establishment was increased from two to three following an approval from the Planning and Resource Allocation Committee (PRAC) to establish the post of Innovation and Business Development Operations Manager. Mr Arnold Moyo was appointed as the Innovation and Business Development Operations Manager. He joined Dr Gatsha Mazithulela, the PVC-IBD and Mrs Esther Jasi, the Personal Assistant to the PVC-IBD.

Activities and contributions to the NUST 2019-2023 Strategic Plan

The office of the PVC-IBD was involved in several initiatives meant to secure investment for infrastructure development. These involved reaching out to private sector companies, commercial as well as infrastructure-oriented banks. This outreach and engage ment of various stakeholders was for the benefit of existing incomplete buildings as well as Greenfield projects such as the School of Health Sciences Campus and student residences. The IBD office working with the Department of Physical Planning, Works and Estates (PPWE) coordinated the construction of the Innovation Hub, on behalf of the Department of Innovation, Product and Service Development (IPSD), the client department.

These efforts culminated in the official opening of phase one of the NUST Innovation Hub on graduation day in November 2019. All the above efforts contributed directly to the Infrastructure Development pillar of the NUST 2019 – 2023 Strategic Plan.

As strategic growth initiatives, the PVC-IBD also made applications for land to establish satellite campuses of NUST in Victoria Falls and Harare. The office of the PVC-IBD managed to obtain Investment Committee approvals for several investment projects and initiatives including funding for the solar power generation project by the technology partner/contractor, establishment of a cannabis cultivation business, establishment of a university-transport shuttle service. The Committee also approved the US\$10 million dollar venture capital line

The primary mandate of IBD is to coordinate and drive the delivery of Innovation and Industrialisation by initiating, recommending, implementing and monitoring policies and procedures dealing with university business development.

of credit for the proposed cannabis cultivation business. All the above-stated initiatives sought to build new revenue streams for the university, in line with the new University 5.0 mandate as well as the Business Development strategic pillar of the NUST 2019 - 2023 Strategic Plan.

Finally, the University collaborated with the Ministry of Women Affairs, Community, Small and Medium Enterprises Development in the expansion of the Bulawayo Technology Centre (BTC) to NUST. Under this partnership, NUST received state of the art milling, fabrication and food processing equipment for the benefit of students, women, young people and SMEs and industry at large. Establishment of this plant will enable NUST to contribute significantly towards the re-industrialisation of the country through SME development.

Challenges

The CANNABIS Project stalled after encountering untenable licensing regulations that were considered to be unfriendly to investors and entrepreneurs. As a result, the offer of the US\$10 million venture capital line of credit could not be taken up. The University also saw a number of infrastructure development and other investment programmes failing to take off because of the prevailing currency and general macro-economic instability. Several projects were put on hold pending the anticipated improvement in the business environment.

Future Plans

The PVC-IBD recruited a permanent Innovation and Business Development Operations Manager in December 2019. Vacancies for the Directors of (i) Physical Planning, Works and Estates (PPWE) and (ii) Innovation, Product and Service Development (IPSD), than can help contribute directly to the Organisational Effectiveness pillar of the NUST 2019 – 2023 Strategic Plan, will be filled in 2020. Efforts to drive innovation, industrialization, infrastructure development and business development shall continue to guide activities of this office in the coming year, 2020.

The office of the PVC-IBD managed to obtain Investment Committee approvals for several investment projects and initiatives.

Dr Gatsha Mazithulela

Acting Director, NUST Innovation Hub, Mr Aleck Ncube

Innovation Hub



Introduction

uring 2019, the department formally changed its name from Technopark to Innovation Hub. This change was necessitated by the Department's re-defined and revamped roles of more innovation commercialisation and alignment with the parent ministry's Education 5.0 philosophy of innovation leading to industrialisation. The Innovation Hub is located in the Pro-Vice Chancellor, Innovation and Business Development office. The mandate of the Innovation Hub is to handle the commercialisation of university research outputs via spinoffs and start-up companies. The Innovation Hub is also responsible for the protection of the university's intellectual property and for both in-ward and outward technology transfer at the university. The internal stakeholders of the NUST Innovation Hub are comprised of the university administration, the academic community and the whole NUST community as a whole. The external stakeholders are the government, business community, SME's and Industry.

The Innovation Hub has the following objectives:

- Enable the acquisition, transfer and utilization of technology to and from the university in a more responsible manner so that the institution becomes accountable to the government, the public who are the tax payers and the inventors.
- Facilitate and strengthen links between the university and the private sector including industry, small and medium enterprises, and to foster collaboration.
- Act as a provider of incentives to local researchers, so that they benefit from the royalties from the commercialization of their inventions.
- Enable the generation of income for the universities.
- Provide expertise in the handling of research contracts involving collaborative research.
- Guard against the premature disclosure of inventions in the university.
- Provide a platform for the resolution of intellectual property disputes.
- Provide an Intellectual Property Technology Transfer focal point for the university.
- Contribute to the national economic development of Zimbabwe and to the advancement of science and innovation.

The Innovation Hub phase One building was officially opened by HE the President and Chancellor of the university CDE. E.D. Mnangagwa on the 9th of November 2019. The occasion was witnessed by several dignitaries who included the Chairman of the NUST council, Eng. A.

The department formally changed its name from Technopark to Innovation Hub. This change was necessitated by the Department's re-defined and revamped roles of more innovation commercialisation and alignment with the parent ministry's Education 5.0 philosophy.

Tenants of the Innovation Hub

NUST Technology Centre

Mabhena as well as several government officials who included the Minister of Higher and Tertiary Education, Science and Innovation Development, Prof. A. Murwira.

The Applied Genetic Testing Centre (AGTC)

The AGTC is one of the two first tenants of the completed Innovation Hub building on campus. The AGTC is currently specialising in Human and Animal Genomics and it has plans to expand its services to include plant genetics.

The Software Development Laboratory

This is a high tech facility with state of the art information and communication technologies for use by software developers in the development of ICTS based solutions for business, government and Industry. The centre is primed to be one of the leading software application development laboratories in the country. The department of computer science is a key player in this initiative.

The Innovation Hub is an active member of the Confederation of Zimbabwe Industries (CZI) Matebeleland Branch. The Acting Director is a committee member of the CZI Matebeleland Executive. In addition, the Acting Director of the Innovation Hub was also elected to Chair the Provincial Quality Forum for Bulawayo, Metropolitan Province. The Quality Forum is tasked with ensuring that goods and services produced in the province meet quality standards in order to be competitive on the market. The Innovation Hub seeks closer cooperation with Industry in order to enhance its commercialisation activities. Academia-Industry collaboration is crucial in the success of the Education 5.0 initiative.

The university in partnership with the Ministry of Small and Medium Enterprises has entered into a partnership for the establishment of the NUST Technology Centre. With support from the government of India, specialised manufacturing and food processing equipment was delivered to NUST and it is hoped that this equipment will enhance the co-operation of the university with Small and Medium Enterprises who are expected to use the equipment to improve the quality of their products. NUST experts are expected to assist in training SMEs in improving their processes and operations.

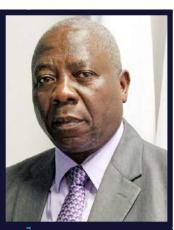
In June 2019, the Acting Director of the NUST Innovation Hub was invited by the World Intellectual Property Organization (WIPO) and spent two weeks in Strasbourg France at the University of Strasbourg's Centre for Intellectual Property Studies (CEIPI) where he undertook an Advanced Training Course on Intellectual Property, Transfer of Technology and Licensing. In addition, the acting director also undertook a World Bank advanced course on Software Licensing including Open Source.

Being a newly reconstituted department within the university, the Innovation Hub is currently understaffed in view of the tasks that it needs to accomplish.

The Innovation Hub seeks to take advantage of the Ministry of Higher and Tertiary Education, Science and Innovation Development's education 5.0 initiative to spearhead the commercialisation of the university's research outputs. There is an urgent need for the university to adopt and promulgate the NUST Consultancy Policy. In view of the limited space in the Innovation Hub phase one building, the construction of the second phase of the Innovation Hub is set for 2020 and will also involve the construction of Factory Shells for the establishment of an Industrial Park.

The Innovation Hub will be involved in activities that seek to strengthen its operational capacity. This phase is crucial in that the Innovation Hub will be carrying out campaigns to raise IP awareness. A lot of advocacy work will be carried out during this year. Seminars and workshops will be carried out to educate the academic community on IP. The advocacy will be carried out with the aim of developing a strong relationship with Deans of faculties, so that they can influence academics in their faculties on IP issues. The Innovation Hub will develop a resource center of IP resources, which needs to be constantly updated due to the fast changing character of IP and technology.

Mr. Aleck Ncube Acting Director, NUST Innovation Hub



Acting Pro-Vice hancellor Academic, Dr. N. Puthi

Pro Vice Chancellor - Academic

he year 2019 was filled with relatively high activity in the institution-wide operations covering various sections and departments of the university. The Academic, Research and Consultancy (ARC) arm of the Vice-Chancellor's Office had its fair share of plans, activities and accomplishments in the twelve-month period under review.

Prominent among the occupations of the Academic section was its participation in the Strategic Plan (2019 – 2023) processes that began in earnest in early January through meetings of Principal Officers, Administration, and culminating in the Senior University Administrators Seminar (SUAS) joint meeting with NUST Council at Victoria Falls on 7 February 2019. The Strategic Plan was finally completed and presented to Council in March, and Faculties, departments and sections immediately went on to develop their own operational plans, and the monitoring and evaluation (M&E) reports were produced on July 31 (First and Second Quarter) and November 30 (Third and Fourth Quarter).

On the development of teaching programmes, we attended a Zimbabwe Council for Higher Education (ZIMCHE) workshop on National Qualifications Frameworks in Harare, and we hosted the Chief Executive Officer of ZIMCHE on 16 September where he held a seminar on the role of ZIMCHE, institutional quality, and institutional self-evaluation. He went on to carry out a brief tour of the NUST teaching and learning facilities. ZIMCHE further invited Deans and programme Coordinators to a two-day workshop on minimum bodies of knowledge (MBKs) at MSU starting on 22 July. From that workshop is expected a national document guiding all universities on full harmonisation of curricula to enable comparable degree programmes, inter-institutional student transfers, and clear quantification of learning in universities.

Decisions made at Academic Board included the change of regulations to allow students to carry first year courses into fourth year. A decision was also made to move ahead with the introduction of a double intake at NUST (March and August) following the successful introduction of the first March (moved to May) Intake for first year students in 2019. A workshop was conducted by the Human Resources department on internal Staff Skills Audit, and departments produced skills data on their sections.

Faculty operations, taking a cue from the Strategic Plan 2019 – 2023, focused on growth, efficiency and quality university experience. Hopes for additional teaching and office space from the construction of prefabricated structures vanished as the project suffered a serious setback, and had to be demolished before completion. Advertising, short listing, interviews and appointments were done for a number of departments where vacant posts were created by resignations and other reasons. Otherwise, the national freeze on new appointments remained in force, maintaining the staffing pressure in certain departments. While a number of teaching staff applied and were granted Tenure, the Academic Staff Promotions Committee approved the promotion of several staff members into grades of Senior Lecturer, Associate Professor and Full Professor. Several new departmental Chairpersons went into office during the year. Problems with industrial attachment visits prevailed due to the changed economic situation, mainly with regard to transport. The Department of Computer Science designed an online method of assessing their students on Industrial Attachment, a method which it is encouraged that other departments adopt. In Commerce, a proposal was made on 11 December by Tarryn Campbell of Ernst & Young (Accountants and Auditors) to engage Accounting students on shorter periods of industrial attachment. This method needs to be explored further as a way to alleviate the current problem of placements in some departments and faculties.

Research and Development Board (RDB), in consultation with Research and Innovation Office (RIO), facilitated the Annual Research Day (20 – 21 June), disbursement of research grants and the attendance by staff members at various conferences within and outside Zimbabwe. Funds for research and travel grants got depleted towards the end of the year such that some applications were not awarded their requests or got reduced funding. Among the conferences attended was the 12th SANORD Annual Conference held at the University of Botswana from the 11th Sep-

tember and attended mainly by members of the Faculty of Science and Technology Education. The UNESCO-supported Conference for Vice Chancellors, Pro Vost and Deans of Science, Engineering and Technology (COVIDSET) was also held at Victoria Falls on 20 and 21November. Faculties and departments engaged in research and community projects which include the SIDA – funded SOLTRAIN project by the Department of Industrial and Manufacturing Engineering, the Education for Sustainable Development – Sustainability Starts with Teachers project by the Faculty of Science and Technology Education, and the Mpopoma Residents' request for consultancy services by the Department of Civil and Water Engineering.

The University acquired for the first time, the anti-plagiarism software Turnitin and workshops were held to train relevant staff on the use of the software. The Institute of Development Studies (IDS) enrolled a record number of PhD candidates who were treated to an orientation workshop on 16 and 17 May. The Faculty of Commerce later in the year also recognised a record number of staff who had recently attained PhDs, and encouraged those who were about to complete their PhDs.

Matters affecting the student body were dealt with amicably on the whole, although students got engaged in demonstrations against boycotts of lessons by lecturers. When consulted over adjustments in the fees following the fall of dollarization in the country, students resisted any increases even though they wanted better service delivery. The Student Affairs Committee welcomed the transition to the new Student Representative Council (SRC) and the indication of an appreciation for abated unnecessary student confrontation with University Administration. The Government-CBZ Bank Student Loan scheme was launched but by the end of the year there were only very few takers. Sudanese students continued to experience difficulties with their stipends especially when the university moved from US dollar to RTGS payments. Disciplinary cases involved examination cheating and one case of fraud and theft during industrial attachment.

The university's external engagements, collaborations, visibility and impact were strengthened by the visits made into and out of the university at different periods in the year. The new President and Vice Chancellor of Ba Isago University, Professor Hay-Swemmer and her team visited NUST to seek consolidation and expansion of the current collaboration through a revised MOU. Another MOU was signed between NUST and the CTIF Global Capsule, paving way for multi-disciplinary research in disciplines of business, health, science and technology, and the arts. The Joint Command Staff Course members in the Zimbabwe National Army and other defence units in the SADC region paid their annual visit and toured the university units, in particular the fledging Innovation Hub. The Faculty of Engineering held a successful breakfast meeting entitled: "Stakeholder engagement for sustainable engineering education for Zimbabwe's re-industrialisation agenda". The staff exchange programme between NUST and Uppsala University, Sweden continued with one NUST staff member visiting Uppsala and four students returning from there after a year of sandwich postgraduate studies. On 18 September the Parliamentary Committee on Higher and Tertiary Education, Science and Technology Development visited NUST and held a consultative meeting and conducted a campus tour.

The successful 2019 Graduation on 8 November saw a total of 2652 (1968 undergraduates, 678 masters and 6 doctorates) candidates being capped by the Chancellor, President Emerson Dambudzo Mnangagwa, who, apart from cutting the ribbon at the new NUST Ceremonial Gate and officially opening the new NUST Innovation Hub building, received the Doctorate (Honoris Causa) in Philosophy of Education, all on the same day. This was the climax of all the academic and other supporting activities of the university in the year under review.



Registrar Mr. F. Mhlanga

Registrar



Students in an Exam

Introduction

he year 2019, ushered a new era in the form of the restructuring of the Registrar's Department. The restructuring entailed the creation of the Office of the Deputy Registrar, Human Resources, and the incorporation of the Salaries and Staff Welfare Section into that newly estab- lished Office. The Salaries and Staff Welfare Section has been hitherto under the Bursar's Department. The newly established Deputy Registrar, Human Resources portfolio is concerned with human resources issues that include, Training and Staff Development as well as Salaries and Benefits. The restructuring also extended the portfolio of the Deputy Registrar, Ad-ministration, through the creation of the Central Records Management and Commercial Cater- ing units in addition to Central Services and Security units. The restructuring has broadened the Registrar's Department provision of support services.

Staffing

The following table summarises the level of staff in post in the Registrar's Department against the authourised establishment as at 31 Section | Registrar's Department against the

December, 2019.

Table 1: Staffing levels

The Registrar's Department is mandated with ensuring that the University has relevant human skills to efficiently and effectively meet its goals. The combined total number of staff was 1080 as at 31

Section	Establishment	Number in Post	Vacant
Registrar Office	8	8	Nil
Admissions and Student Records	13	12	1
Examinations	9	8	1
Human Resources	18	10	8
Central Services	106	98	8
Security	151	103	48
Student Affairs	20	20	Nil
Total	325	259	66

December 2019. The tables below show a summary of Lecturing and Non-Lecturing staff totals in the University.

The year 2019, ushered a new era in the form of the restructuring of the Registrar's Department.

Table 2: Lecturing Staff

Staff Category	Total in Post			
Professor	16			
Senior Lecturer	29			
Lecturer	326			
Research Fellow	20			
Teaching Assistant	1			
Staff Development	9			
Research Assistant	2			
Totals	403			

Table 3: Non -Lecturing Staff

Staff Category	Total in Post
Senior Administrative Staff	27
Middle Administrative Staff	68
Secretarial & Clerical Staff	172
Technical Staff	103
Junior Non-Academic Staff	307
Totals	677

Achievements/Contribution to the Strategic Plan

Notwithstanding the financial inadequacies obtaining in the University, the Registrar's Department achieved some of its goals. The achievements are outlined under the following Sections of the Department:

Contribution to the Strategic Plan

In terms of the University's Strategic Plan 2019-2023, the Registrar's Department had Organisational Effectiveness as a key Strategic Direction. In the context of the said strategic direction, Academic Registry drafted the Examinations Policy which was approved by the Academic Board. Furthermore, Academic Registry successfully implemented the Electronic Transmission of Examination Question Papers and Research Degrees theses to External Examiners for external moderation. In addition to the above achievements, the 2019 Yearbook or Prospectus was successfully updated with the assistance of the Publishing Studies Department which provided editorial expertise.

The Deputy Registrar Administration Section, in line with above mentioned Strategic Direction, reviewed and developed a number of policies that are ready for approval by the University Council. The policies are namely: Training and Staff Development, Recruitment, Selection and Appointments (Staff Handbook), Performance Management, Health and Safety, and the Policy on Letting of University Property and Facilities.

Admissions and Student Records

Total student enrolment in the University continued to increase, with the year 2019 surpassing the enrolment for the year 2018. The increase over the years has been from a total of 8 651 in 2015 to a total of 11 329 in 2019. Similarly, at Faculty level enrolment has been gradually increasing, with the Faculty of Commerce dominating enrolment at 37% followed by the Faculty of Applied Sciences at 20%. However, the total enrolment for the STEM programmes or disciplines, which is the mandate of the University, was 62.5% in the year 2019. The steady rise of the enrolment total is clearly shown in table 4 below.

Table 4: Enrolment statistics

YEAR	2015	2016	2017	2018	2019
APPLIED SCIENCE	2123	1887	1908	2389	2284
THE BUILT ENVIRONMENT	509	551	1025	1098	1167
COMMERCE	3597	3651	3327	4024	4252
COMMUNICATION AND INFORMATION SCIENCE	704	737	664	747	752
ENGINEERING	1358	1399	1819	1871	2053
MEDICINE	104	139	166	201	161
SCIENCE AND TECHNOLOGY EDUCATION	256	359	489	490	660
GRAND TOTAL	8651	8723	9398	10820	11 329

The stead rise of University's total enrolment has correspondingly increased the number of graduates. As shown in the table below there was an increase of 4 % in 2018 compared to the preceding year.

Table 5: Graduation Trend Analysis

	2015	2016	2017	2018	2019
BACHELORS DEGREE	1759	1618	1616	1728	1982
MASTERS DEGREE	629	606	733	705	683
MASTER OF PHILOSOPHY	3	3	5	1	0
DOCTOR OF PHILOSOPHY	5	9	5	3	6
POSTGRADUATE DIPLOMAS AND DIPLOMAS	93	98	64	81	58
TOTAL	2489	2334	2423	2518	2729

An analysis of the graduation statistics indicates an 8.4% increase in the number of students who graduated in 2019 compared to 2018.

The following programmes had students that graduated as the first cohort:

- 1. Bachelor of Science Honours Degree in Midwifery
- 2. Bachelor of Science Honours degree in Animal Science (In collaboration with Gwanda State
- 3. Bachelor of Technology Honours Degree in Construction Engineering (In collaboration with Mutare Polytechnic)

Examinations

The operational efficiency of the University's examinations systems was largely improved in the year under review mainly due to the acquiring of a Canon state of the art photocopier which has a speed of 85 papers per minute.

The stead rise of University's total enrolment has correspondingly increased the number of graduates.

Security Services

The Security Services continued with the process of installing CCTV cameras and consequent to the increased number of installed security cameras, there was a marked reduction of criminal and traffic offences within the University precincts compared to the previous year. The installation of CCTV improved the University's capacity to detect criminal activities.

Central Records Management Unit

The newly established Central Records Management unit was set up in collaboration with the Department of Records and Archives Management in the Faculty of Communication and Information Science. A budget to cover the staff establishment, equipment and space was submitted to the Planning and Resources Allocation Committee.

Commercial Catering Unit

In the absence of a fully established Catering unit, part of the catering function was subcontracted to an outside supplier who augmented the existing catering services.

Human Resources

The Training and Staff Development unit conducted a total of seven in-house workshops for all categories of staff. The unit effectively facilitated the training of all categories of staff members. A total of 226 staff members were in various stages of completion of their training, with 101 being Non-Teaching Staff and 125 being Teaching staff.

Central Services Unit

The Central Services Unit activities generated a total of \$ZW 237 960.50 through rentals from staff residences, lease fees from service providers, University Guest House, and hire of venues and furniture.

Programme	Vice Chancellor's Department	Registrar's Department	Bursar's De- partment	Library	Applied Science	Built Envi- ronment	Communication and Information Science	Engi- neering	Total
PhD	2	3							5
Masters	4	2	10	2	2			3	23
Undergraduate	5	12	5	2	6	1		3	34
Diploma					1		1		2
Other Programmes									
Completed (2019)	5	17	2		3	1			28
Total Studying (2019)	16	34	17	4	12	2	1	6	92

Training and Capacity Building

The Department continued in 2019 with its programme of training and capacity building

through approval of requests by staff to study for various Degree and Diploma programmes. As at 31 December 2019, a total of 101 Non-Academic members of staff were enrolled in different programmes of study while a total of 29% the same category of members of staff completed their studies. The table below gives a statistical summary of the members of staff that are being trained by the University through the Staff Development Programme.

Challenges

- 1. The financial and economic challenges prevailing in the country did not spare the Registrar's Department, thereby affecting the smooth running of operations. The impact of the economic challenges was evident in the lack of ad
 - herence to registration deadlines by students due to non-payment of fees. Late registration by some students resulted in Academic Departments having to revisit the posting of examination marks to accommodate the late registrations.
 - 2. Lack of adequate and requisite infrastructure affected the Examinations unit in terms of space for secure storage of examination material. The physical records filed at the Admissions and Student Records were not in a manner that facilitates easy retrieval due to the challenge of inadequate infrastructure.
 - 3. The issue of infrastructure has been a challenge for a number of years, and its effects have spread to the recruitment of students. Admissions and Student Records processed a total of 5 694 applications for admission into First Year and only 2 868 were offered places due to issues relating to lack of sufficient teaching space.
 - 4. Budgetary constraints impacted negatively in the purchase of requisite goods and services as well as implementation of renovations. A case in point was the closure of the University's only Guest-House in October 2019, the inability to renovate staff accommodation, non-purchase
 - of classroom and boardrooms furniture and the closure of the staff canteen due to non-compliance with Bulawayo City Health regulations.
- 5. Despite the need for additional equipment and furniture in lecture rooms and boardrooms as well as the repair of furniture, the Department was financially constrained to undertake these activities.
- 6. Efforts to reduce the staff vacancy rate from 32% to 25 % was hampered by the government moratorium on staff recruitment.

The Department plans to restructure the Admissions and Student Records Section by creating two distinct offices that are on one hand, the Admissions Office and on the other hand the Student Records Office

Future Plans

Restructuring of Admissions and Student Records Section

In our endeavour to enhance operational efficiency, the Department plans to restructure the Admissions and Student Records Section by creating two distinct offices that are on one hand, the Admissions Office and on the other hand the Student Records Office. This is in line with international practice and standard.

Automation of the Examination Timetable

The timetabling of examinations has been hampered by lack of an automated system. Therefore, Academic Registry in collaboration with the University's Information, Communication and Technology Services (ICTS) plans to implement a timetabling system for examinations using software that ICTS will develop. Implementation of the timetabling software will enable the Examinations Section to produce an online/electronic individualized timetable as opposed to a manually produced timetable.

Implementation of a feedback system

In view of our desire to continuously improve service in Academic Registry, there are plans to introduce a customer feedback system. This will be achieved through installation of suggestion boxes and website based request for feedback, in order to get suggestions from students, staff and other stakeholders, on ways in which to deliver quality service. The planned feedback system will serve as a platform for our customers to evaluate our performance.

Future Plans based on the 2020 Operational Plan

The Operational Plan for 2020 will be used as a guide to ensure compliance with policies, procedures and rules; and the following will be undertaken:

- Training will be conducted according to the University Calendar to ensure that all levels of staff are exposed to the workings of the University
- The setting up of the Central Records Management and Commercial units will be finalised
- Fund raising efforts through the renovated facilities will be improved and simultaneously administrative, financial procedures and systems will be put in place
- Standard operating procedures will be developed for jobs in the Department
- Automation of application forms for hire of facilities, coordination of records management and catering unit processes will be undertaken.

F Mhlanga Registrar

Librarian K Matsika

THE NUST LIBRARY



Delegates at Geneva Conference

1.0 INTRODUCTION

he University Library is headed by the University Librarian, Ms Kathy Matsika who is deputized by Mrs Daphne Sibanda, assisted by three members of the Library Management Team. The three major divisions drive the functions and services that provide support for all academic activities and research at NUST. The Client Services Division oversees the Circulation Department, Reference Section, E-Resources Section and the Library Outreach and Marketing Services. The Division of Technical Services drives Library Acquisitions, Bibliographic Services for processing and Collection Development, and the Institutional Repository Unit which is slowly developing into an important support facility for researchers at NUST. The Information Technology (IT) Unit is the hub for technology in the Library making it possible to use technology to drive library services. Led by the IT Manager, the section is expected to ensure high technology is adopted for the smooth delivery of resources for teaching, learning, research and development of the innovation hubs at NUST.

As leader of the Management Team in the Library, I am grateful for the support of the University's Executive Management, as well as the Library's dedicated staff. Despite the hardships the Team members excelled. They maintained a client driven focus and concentrated on the delivery of services to the NUST community. Without this support and effort, the Library would not have achieved the milestones highlighted below. The activities of the University Library during the period under review were focused on achieving their vision of being a research library that is internationally recognised for redefining academic librarianship.

As leader of the Management Team in the Library, I am grateful for the support of the University's Executive Management, as well as the Library's dedicated staff

2.0 STAFFING IN THE LIBRARY

The following Table summarises the level of Staff in post in the Library in 2019

Section	Establishment	Female	Male	Total
Librarian's Office	6	6	0	6
Client Services	14	6	8	14
Branch Libraries	13	5	4	9
Technical Services	13	5	6	11
Library IT	3	1	2	3
Students on Attach- ment	6	2	4	6
Library Security	6	3	3	6
Central Services in Library	3	2	1	3
TOTAL	64	30	28	58

3.0 STRATEGIC PLAN 2019 -2023

In 2019, the University Library adjusted its focus to Education 5.0 in line with the Ministry of Higher and Tertiary Education, Science and Technology and Innovation Strategic Plan. As such, the Library had to reconfigure its objectives in order to be compliant and support the five pillars of teaching, research, community engagement, innovation and industrialization.

4.0 ACHIEVEMENTS

Achievements of the Library are as outlined under the following Sections:

4.1 Electronic Library

Despite the constraints brought by National Currency reforms, which eroded the Budget and reduced the Library buying power, the Library managed to:

- Subscribe to electronic resources through the facility provided by the Zimbabwe University Libraries Consortium. This includes e-books, e-journals.
- The Library focussed mainly at providing up-to-date electronic resources. This fulfilled the Library strategic ambition to modernise and improve facilities and services to meet the needs of the university community.
- The Team managed to provide adequate support to the university community through added initiatives that would strengthen use of technology to drive Library services in order to achieve the desired impact on teaching and research services.
- The NUST Library included in its redrafted Strategic Plan, its drive toward being a knowledge management hub. It plans to focus on supporting the learning needs of its clients, providing customised research support to deliver information and knowledge solutions that cater for staff and students' every need. This is meant to contribute toward the establishment of Innovation Hubs and Industrial Parks at NUST.

Library 2019 Statistics Checkouts By Faculty

Miscellaneous Checkout Statistics

FACULTY	2015	2016	2017	2018	2019	%CHANGE
Applied Sciences	5458	2588	2330	2512	2779	11%
Built Environment	965	744	546	459	379	-17%
Commerce	7487	4475	2689	2124	2321	9%
Communication & Information Science	1861	1248	804	603	842	40%
Engineering	2415	1583	1322	1457	1598	10%
Science & Technology Education	77	162	251	370	345	-7%
Medicine	1799	1957	1914	2060	1855	-10%
Total	20062	12757	9856	9585	10119	6%

Faculty with highest checkouts: Applied Sciences (2779)
Faculty with highest %

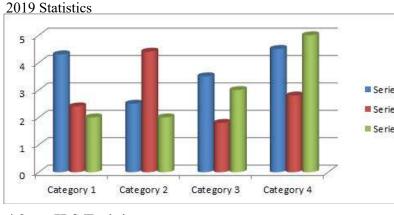
increase in checkouts:

Communication &

Information Science
(40%)

 A notable increase was recorded for the Faculty of Communication & Information Science

NUST Library



Miscellaneous Checkout Statistics

Faculty with highest checkouts: Applied Sciences (2779)

Series 1 Faculty with highest % increase in checkouts:

Series 2 Communication & Information Science (40%)

 A notable increase was recorded for the Faculty of Communication & Information Science

4.2 ILS Training

The Library remained active in offering training to its students and members of the academic/research community. In its Strategic Plan, the Library planned at least one ILS training programme per year in everyone of the 34 Academic Departments. In 2019, 21 departments were covered. The variance of 13 would be erased if Departments were to allocate time for the Library Team conduct ILS training.

4.3 E-Resources Training

Every year the Library has collaborated with the Research and Development Office in offering training to academics in the usage of E-Resources. This was offered to eight academic staff members.

Training included accessing and searching through the Library's subscribed databases. They also requested training in using reference management tools.

4.4 REMOTEXS

- The Library restored remote access facility for distant users. Constant power outages affected the Library site which made it difficult for access the eLibrary.
- The Library subscribed to **REMOTEXs** which was activated in the last half of 2019 restored remote access to eResources.

4.5 Social Media Platforms in the Library [insert symbols of WiFi, Facebook, Whatsapp]

The shortage of physical space has been a handicap to the Library for a long time. It has limited the Library's ability to create better facilities for different activities for students. Spaces for shelving books, students seating and office space have forever been in short supply.

• The library took a decision to activate its dormant Social Media platforms and introduced more platforms to at least expand virtually and reach out to its students, especially the younger generation. It activated the Library Facebook Page, Twitter handle, Library Live Chat facility and a Whatsapp Facility to improve communication.

the 'Live Chat'

The most popular facility at this moment was the 'Live Chat'. The facility was particularly busy during 2019. The Reference Team provided a dedicated Online Service during the Library opening hours and attended to all enquiries on the Live Chat.

5.0 CHALLENGES

5.1 Library Facilities : Maintenance Issues

- The fire detection system is still out of order
- External Painting of the Library not done despite repeated requests.
- There Department of Physical Planning, Works and Estates was informed about cracks and roof leaks in August 2019.
- The extractor in the basement still needs to be attended to.

5.2 New Library on Campus

In 2019 the Library experienced a phenomenal rise in demand for digital information services. Users also sought facilities and spaces that allowed them collaborative learning. The current Library has space constraints. The desired long term solution is for the completion of the University Library building on Campus.

There is an urgent need for the completion of the new University Library structure on Campus. We expect the future Library to be the most habitable space on Campus, a space for serious reading, designed to allow discussion, group study with white boards and technology to support this, leisure and relaxing place for those wishing to watch films, videos, or just relaxing.

5.3 Library Space

The Main Library for the longest time has had challenges with space for shelving books and seating for students. Addition of new books for circulation has been a challenge. The Library had to remove some books from the shelves as well as limit the number of multiple copies displayed on the shelves in order to accommodate new books

5.4 Under resourced E-Resources Centre

The Library's e-Resources Centre remained under resourced with just about 10 computers functioning. The problem was compounded by the expected phasing out of Microsoft Windows 7. The Library was faced with a challenge to replace all the workstations with Windows 10 compliant machines. This created a lot of pressure to the Library Team as no immediate solution was available from the Institution.

5.5 Lack of Access to Millennium in Branch Libraries.

The Branch Libraries on Campus continued to experience challenges with the Campus Network. Since 2018 Campus Branch libraries at The Graduate School of Business (GSB) and The Faculty of the Built Environment (FOBE) had to

revert to a manual Issuing System because of challenges faced in connecting to the Millennium System (Library Integrated Management System) in use at the Main Library.

6.0 FUTURE PLANS

6.1 Research Support Services

From the wider discussions during the University Strategic Planning exercise in 2019, the Library noted the strong desire to improve the quality of research at NUST.

Plans are afoot for the following:

- The Library would like to focus on advanced research support services to the Academic community.
- Support with bibliometrics, e.g., Scopus, Advice on researcher profile management, Training in Reference Management, Current Awareness Services Training researchers on how to upload content onto the Institutional Repository (IR)
- Research Data Management
- The successful management of research data is an essential part of the research process This is particularly important for the University to maintain its reputation as a leading research institution. It is therefore imperative that researchers, library staff and University support staff are equipped with the necessary skills to perform this function.

6.3 Harare Library

The Library remained hopeful that NUST would identify a suitable space in Harare where the Library could set up a facility to cater for the Harare-based cohorts. This would provide an e-Resource Centre, an Information Commons with computer facilities that would provide study spaces for students in Harare.

7.0 CONCLUSION

The Library Team continued their involvement in professional associations.

- The Systems Analyst was part of the IT Team for the Organising Committee for the ZULC International Conference
 organized by the Zimbabwe University Libraries Consortium(ZULC) Conference was held March 2019. Among
 other tasks, the team worked on a customised ZULC website for the event, necessary graphics for the occasion and
 a feedback survey.
- Four NUST Library members of staff presented papers at this conference attended by delegates from as far afield as Nigeria, Kenya, Tanzania, Zambia and South Africa.
- The University Librarian represented ZULC at two WIPO organised Conferences on the Copyright and the Marrakesh Treaty. The first one was an Africa wide Regional Conference held in Nairobi, Kenya in June 2019. The second conference held in Geneva, Switzerland brought delegates that attended Regional Conferences in Kenya, Singapore and Brazil to chart the way forward on the issues of Copyright and access to information. (Insert Geneva photo)

Director ICTS, Mr Clifford C.L Sibanda

The department

managed to pur-

chase a new UPS (Uninterruptable

system with a power

rating of 10KVA was installed at the server

room. It has the

capacity to provide

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ful shutdown of the

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prolonged power

outages.

Power Supply)

ICTS DEPARTMENT



Admin Block

CTS is a Support Department that provides a fully integrated, efficient and dynamic information system to service the information needs of the Students, Academic Staff, Library and the Administration in order to enhance their learning experience, teaching, research and work.

The department undertakes to:

- Promote the University's vision of being a world class University in science, technology, innovation, entrepreneurship and business development spearheading industrialisation locally and beyond for sustainable development by providing the necessary infrastructure and sys-
- Design and implement systems which will enhance the quality of student experiences within a stimulating cultural and social environment, through effective programme delivery academic support services and quality assurance procedures.

ICTS will endeavour to:

- Develop a business culture that is service oriented in relation to the user community.
- Be always responsive to the users' needs in an environment where change is the only constant.
- Be proactive in coordinating the university's efforts to streamline administrative procedures and lead the University in embracing new technological solutions in its day-to-day activities.
- Provide an environment where staff can maximise their skills and capabilities thereby helping staff invest in their commitment to the organisation.

To be a dynamic world class centre of innovation and endeavour to provide excellent ICT services to the University community.

The organisational structure of ICTS currently has 3 sections with specific yet interrelated functions, namely: Networks and Infrastructure hardware section, Systems and Software section and User Support and Training section.

1.2 **STAFF**

The departmental staff compliment is as follows:

Position			Establishment	Inpost
Director			1	1
User Suppo	rt & Training Manag	ger	1	1
Network & I	Infrastructure Mana	ager	1	1

Systems & Software Manager	1	1
Software Engineers	2	1 (Acting)
Network Engineers	2	2
Systems Analyst	1	1 (Acting)
Webmaster	1	1
Assistant Webmaster	1	0
Systems Administrator	1	0
Network Administrator	1	0
Chief Technician	1	1
Software Support Technicians	6	1(3 On Contract)
Network Support Technicians	4	4
Hardware Support Technician	2	1 (On Contract)
Programmers	2	2
Telecoms Technician	2	2(On Contract)
Helpdesk Attendant	2	1 (1 Acting)
Data Capturer	3	2 (1 Acting)
Chief Secretary	1	1
Chief Telephonist	1	1
Telephonists	5	5
Senior Secretary	1	0

Networks and Infrastructure Hardware

This section of ICTS is responsible for the installation and maintenance of all ICT backbone infrastructures including the fibre cables, copper cables, routers, switches, servers and wireless Access Points. In 2019, the highlights and projects for the section are as summarised:

a) Innovation Hub Network

Networking of the building was completed. Installation of switches, Wi-Fi access points and VoIP phones was completed. Installation of CCTV cameras to cover the inside of the

building was done.

b) Ceremonial Gatehouse

Installation of the Access Control System at the Gatehouse was completed. The system uses Radio Frequency Identification (RFID) Technology. The RFID automatically identifies and tracks tags attached to a user's card.

c) Server Room UPS

The department managed to purchase a new UPS (Uninterruptable Power Supply) system with a power rating of 10KVA was installed at the server room. It has the capacity to provide backup power for 2hrs 30mins and allows for a graceful shutdown of the servers in case of prolonged power outages.

d) Firewall replacement

The server room firewall was damaged due to previous abrupt power cuts and also worsened by a smaller capacity UPS that was installed at the time. The University then requested a replacement device from Fortinet, which was delivered and installed.

e) Network Upgrade

The fibre link between the Graduate School of Business to the main Commerce communications room was replaced by a new fibre link with many redundant/backup cores as compared to the two cores that were previously installed.

Systems and Software

a) **NUST Website**

The following web pages were redesigned and deployed:

- Faculty of the Applied Sciences
- Admissions and Students Records
- Alumni

b) Backup Server

An application-aware, image-based backups was configured and commissioned. It supports VMware vSphere, Images, SQL Backups and directory Backup. Due to resource constraints the following services are being backed up:

- Microsoft Dynamics Nav
- NUST Website
- E-Learning Portal
- Online Payments server
- Students Portal

User Support and Training

a) Hardware Purchases

The department in conjunction with the Department of Computer Science came up with the Software Development Lab. The lab is furnished with 8 desktops with the following specifications: 16GB RAM, Core i7, 1TB hard drive to enable software development; it also has a 1 MacBook Pro and an Interactive board.

b) Training

The following training sessions were carried out:

Training	Number of Attendees
Turnitin	70
G Suite	150

Strategic Plan

The department feeds into the following University Strategic Directions:

- 1. Infrastructure Development
- 2. Research, teaching and learning and community scholarly engagement

3. Organisational Effectiveness

In the year 2020 we only managed to fulfil 1% of the goals set for the strategic directions due to the financial challenges the university was facing.

CHALLENGES

2019 brought many challenges but the main challenge was the shortage of funds for all ICTS projects. All projects planned and budgeted for 2019 were stalled to 2020.

PLANS

The table below shows the plans for 2020

GOAL	SET TARGET KPI
Provide ICT services at prefabricated structures	ICT Infrastructure purchased
Improve IT Security	Set Up of a Security Operations Centre (SOC)
Provide services and shared infrastructure to meet the needs of Central Administrative distributed IT departments and end users	Purchased computers and servers
Microsoft Dynamics NAV maintenance and functionality	Functionality Improved
Setup converged networking infrastructure (voice, data and video)	Wi-Fi Coverage , VOIP Implementation

irector Internal Audit, Mrs S Nkomo

The Audit and

Risk Committee

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in 2019 and that

development for

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Audit function.

porate governance

was a positive

INTERNAL AUDIT



Introduction

he NUST Internal Audit function continues to strive towards attaining an effective internal control system through careful assessment of risk factors and providing assurance and consulting services to management for the achievement of the institution's vision, mission, strategies and related business development objectives. In most of its audits the section sought to establish the adequacy of management systems, controls and structures for risk mitigation against a turbulent economic environment. The Audit and Risk Committee became functional in 2019 and that was a positive development for the Institution to comply with corporate governance standards and also to enhance the effectiveness of the Internal Audit function.

Staff

The staff complement of the Internal Audit section is six, that is; The Internal Auditor; Two Assistant Internal Auditors; Two Chief Audit Assistants and The Chief Secretary. Currently the posts of Assistant Internal Auditors are vacant and they have been vacant for the past six years due to a government freeze on vacant posts.

Training

The Internal Audit section attended the following workshops for continuous professional development. The Internal Auditor attended a workshop on the review of the National Monitoring and Evaluation Policy hosted by the Ministry of Local Government, Public Works and National Housing on the 3rd of September 2019 at Holiday Inn Bulawayo. A visit on information sharing with Midlands State University Procurement Management Unit was conducted on the 14th of March 2019 by the Internal Auditor and the Acting Buyer. A workshop on Risk based Internal Auditing hosted by the Institute of Internal Auditors in Harare on the 9th to the 10th of May 2019 was attended by the Audit Assistant Ms C Msipa.

Internal Audit Engagements for the year 2019

The Internal Audit Activity completed the following audit work and provided management with findings and recommendations to assist in initiating improvements to operations and to strengthen internal controls for effective risk management:

Table 1: Summary review of 2019 audit engagement

No.	Reports Issued	Summary of key Findings/ Recommendations	Risk Rating
1.	Report on Information shar-	The NUST Procurement Management Unit (PMU) not yet	High risk
	ing on procurement systems	registered with the Procurement Regulatory Authority of Zim-	NUST could be penalised by
	with Midlands State Universi-	babwe (PRAZ).	PRAZ.
	ty dated 27 March 2019	Use of manual based processes by the NUST Procurement	Use of manual processes increases
		Management unit, therefore a shift to systems based processes	the risk of omissions and errors.
		was recommended.	Lack of some controls embedded
		The Navision system to be fully implemented and some of the	in the system led to high depend-
		controls to be incorporated into the system.	ence on the employees to detect
		·	errors.

2.	Casual workers dated 6 May 2019	The Casual and Contract workers not supervised and no cloaking system in place to reduce absenteeism. No controls on remuneration processes. No targets for work assigned and therefore contracts for Contract and Casual workers always extended.	High risk
3.	Project Management dated 20 May 2019	Lack of proper planning, monitoring and supervision of projects. Unsystematic purchasing processes and lack of accountability for purchases made. Lack of segregation of duties in most of the tasks carried out.	Very High Risk No success stories in project management.
4.	Receipting, Payments and Banking Processes dated 7 October 2019	Inadequate controls coupled with lack of monitoring and supervision in cash management. Poor oversight over management of foreign currency receipts. Non compliancy to statutory declarations affecting the management of financial resources. Inadequate use of the automated reconciliation system. Delays in interfacing bank accounts to the NAVISION system.	Very High Risk As it takes long to detect fraudulent activities.
5.	Analysis of Outstanding Acquittals: Innovation Hub Project dated 24 October 2019	None and partial delivery of paid up goods and services. Delays in the collection of goods and delivery of services due to lack of coordination between the Procurement Management Unit and the User departments. Lack of reconciliation.	Very High Risk. A large percentage of NUST budget is tied up in purchases. An efficient and transparent procure- ment system is required.
6.	Audit of Nostro accounts dated 4 December 2019	Lack of controls and operational guidelines in the management of foreign currency. No separation of US\$ and ZW\$ denoted transactions in the ledger accounts and in receipting. No reconciliation of foreign currency revenue especially the foreign students accounts.	Very High Risk

Almost all the audits were rated very high risk as some fraudulent behaviour was detected in most of the audits.

Challenges

• The staff freeze by the Government of Zimbabwe has negatively affected the operations of the Internal Audit section as two vacant positions of Assistant Internal Auditors have not been filled since 2013 and 2014 respectively. The unavailability of Computer Assisted Audit Techniques (CAATs). NUST should invest in data analysis and technology-enabled tools in order to increase efficiency and embrace the current technology driven era. Recurrence of adverse audit findings despite audit recommendations made on the same matters.

Plans for 2020

- To train in advanced Excel and use it for data analytics whilst waiting for the purchase of the Audit software.
- To lobby for the recruitment of the two Assistant Internal Auditors.
- To acquire adequate computer equipment.

MRS S. NKOMO



Acting Director Mr C Muchovo

PHYSICAL PLANNING, WORKS AND ESTATE



Admin Block

1.0 Introduction

he Department of Physical Planning, Works and Estates (PPWE) continues to occupy a strategic role in the fulfilment of the University's strategic objectives in general and particularly infrastructural development. PPWE continued to increase teaching space, maintain the existing buildings, water reticulation, transport provision and landscape. The NUST Garden and Mamre Farm have also been added as the Department's responsibility.

The construction of the Innovation Hub Project started in April 2018 and was completed in December 2019. It was officially commissioned by His Excellency, the Chancellor Comrade E. D Mnangagwa. It is currently fully functional.

2.0 Staffing

The Department still faces staff shortages. There were no recruitments during the year owing to the freezing of posts. Out of the 101 positions only 68 are in post and 33 are vacant. The Department relied on contract workers for its various projects and farming activities. However, requests to recruit the Projects Officer, Plumber and Assistant Technicians were forwarded to the Registrar's Department for action. It is hoped that these will be appointed in 2020 in order to alleviate the persistent shortage of critical staff within the Department. The vacant post of the Director has already been advertised. The year saw one driver retiring on attaining the mandatory retirement age.

3.0 Projects

The Department of PPWE is engaged in the Innovation Hub project, prefabricated structures, gate house, and general maintenance.

3.1 Innovation Hub

The construction of the Innovation Hub Project started in April 2018 and was completed in December 2019. It was officially commissioned by His Excellency, the Chancellor Comrade E. D Mnangagwa. It is currently fully functional.

3.2 Prefabricated Structures

In an effort to increase teaching space within the University, the Department embarked on the construction of Prefabricated Lecture Halls. However, these were structurally condemned and had to be dismantled. This is to allow for corrective works to ensure sound structural integrity and safe teaching and learning facilities.

3.3 Gate House Project

The Gate house was completed in December 2019 and was commissioned by His Excellency, the Chancellor. The project was sponsored by PPC Zimbabwe. However, due to financial constraints, some works were not done. NUST has to complete the pedestrian entrance gates by installing turnstiles.

4.0 General Maintenance

- 4.1 Part of the priority of the Maintenance Section, that is, to waterproof all University Buildings, was achieved, with the replacement of waterproofing to the roof above Zone A and the Council Chambers at the Administration Building being a stand-out achievement.
- 4.2 Challenges in property maintenance

Inadequate funding continued to be a major challenge in property maintenance. The 2019 maintenance budget was exhausted in the month of July and efforts by the University to get a supplementary budget yielded no fruits. Inadequate funding manifests itself through low staffing levels, shortage of materials/spares, absence of service vehicles and poorly equipped workshops.

4.3 Plans for 2020

The Sections' objective for the year 2020 is to ensure that all buildings are waterproofed and safe for occupation. Priority areas include the replacement of corroded gutters at the Applied Chemistry and Chemical Engineering Buildings. Plasterboard ceilings that are showing signs of collapsing will also be replaced to avoid accidents.

5.0 Transport

The Department continues to face critical shortage of vehicles. This, in most cases compromises the quality of service to the University at large. Furthermore, fuel shortages in the market have worsened the situation. However, despite the negative operating environment, the Department managed to provide services to the University community. The new vehicles acquired in 2018 played a pivotal role in servicing most of the transport requests that came through.

5.1 Challenges

The section still faces a shortage of vehicles. The fleet is still dominated by an assortment of old vehicles. These are unable to service the day to day running of the University, as well as the annual industrial visits and students field trips as a result of frequent breakdowns.

5.2 2020 Expectations

As the Transport Section we are looking forward to acquiring new buses and smaller vehicles in order to curb the transport challenges. We are hoping to dispose of old fleet in 2020 in the event of adequate budgetary allocation for the procurement of new vehicles.

6.0 NUST Farm

In Mamre, a prefabricated structure, kitchen shed, toilet and a bedroom dwelling were constructed. Two caretakers were hired and are currently housed in these structures. The Department of Civil and Water Engineering has carried out a feasibility study to draw water from the Mananda Dam. However, the farm has not been fully utilized and it is hoped that in 2020 operations will commence.

7.0 NUST Garden Projects

A total area of two hectares was cleared in the interim whilst more land will be cleared subject to the availability of ground water. Pilot projects saw the successful planting and harvesting of vegetables such as cabbages, onions and tomatoes. These produce were profitably sold to the NUST community. Exploratory work is underway to identifying more profitable vegetables that may be produced throughout the year as well as adopting suitable technology to enhance productivity.

Dean of Students Dr S Kamusoko

DIVISION OF STUDENT AFFAIRS



Nust staff and students taking part in family fun day activities.

Introduction

he Division of Student Affairs (DSA), headed by the Dean of students, performs its functions through sections that work together and avail Student Support Services (SSS) in support of the NUST vision. These support services focus mainly on student health and wellness issues. These include high-quality out-of-class experiences that provide students with a balanced campus life. The main goal is to produce world-class professionals who will embrace global challenges and contribute positively towards the advancement of humanity. The report focuses on the successes and challenges experienced by the Division in the period under review.

The University still does not have a Chapel where the students and staff can enjoy worship

Staffing

During the year, staff levels within the Division increased with the appointment of a Chief Nursing Sister in June and a Nursing Sister in December. However, the Division awaits the appointment of a third Nursing Sister. Plans are underway to fill the position of a Senior Administrative Registrar (SAR) urgently, to, besides other responsibilities handle new function of processing government loan schemes.

Training/Workshops

The Chaplin participated in the Association of Commonwealth Universities (ACU) symposium hosted by the University of Edinburgh from 7 to 8 March, 2019. The symposium ran under the theme Developing long-term solutions to supporting refugees and at-risk scholars and, besides providing a forum to share best practices, it showcased innovative approaches to supporting refugees and at-risk scholars.

The Dean of students attended the National Association of Student Personnel Administrators (NASPA) conference in Baltimore USA, from 20 to 22 June, 2019. The conference targeted Vice Presidents of Student Affairs (aka Executive Deans of Students) and primarily focused on peer to peer exploration of the most pressing and emerging challenges facing student affairs leaders, campus executives, their institutions and higher education.

The Sports Administrator was nominated by the International University Sports Federation (FISU) to attend the world university games in July. The games were preceded by a workshop that provided a platform for sports directors, coaches, athletes and researchers to explore and share ideas on the latest technologies, best practices and issues and controversies surrounding sport. In addition, the Administrator joined a team that went on a Sports visitor exchange program in October, organized by the American Embassy. The visit was characterized by professional engagements, theme specific workshops, cultural activities, facility tours, sporting events and sport tourism venues.

Student and Youth Working on Reproductive Health Action Team (SAYWHAT) established a resource centre, funded by United Nations Fund for Population Activities (UNFPA) and continued to engage the Student Counsellors and peer educators in a variety of workshops sponsored by Swedish Aid.

Services

Counseling

There was a significant increase in the overall service uptake in 2019, due to a steep increase in psychological distress cases, apparently induced by the prevailing economic hardships. Service provision was enhanced through two peer educators training workshops. The first one was a Mental Health Awareness Public Lecture facilitated by students with the help of a Green Crescent, Police Narcotics unit and the African Institute for Ending Depression (AFRIBS). The second one involved a combination of Men's Health Dialogues, and Orange Day Anti-Gender Based Violence Campaigns.

The UNFPA and Swedish Aid funded Resource Centre is fully functional and students access Sexual and Reproductive Health information from their peers who man the centre.

Sports and recreation

The year 2019 was characterized by a balanced variety of sporting disciplines and competition platforms such as Zimbabwe Universities Sports Association (ZUSA), Zimbabwe Tertiary Institution Sports Union (ZTISU), league games and also recreational invitational tournaments like Bulawayo Tertiary Institutions Sports Association (BUTISA) and other friendly matches. The following were part of an assortment of awards received.

ZUSA championships

- gold to the taekwondo team
- 8 silver medals chess (women), tennis (women), cricket (men), hockey (women), karate (men), swimming and table tennis (women) teams.
- The remainder of our teams won bronze.

ZTISU games

- Gold medals for the ladies' darts team plus Carling Black Label (Delta) prize comprising 3 dart boards, 3 stands and 6 sets of dart arrows.
- Several silver medals for the athletics team
- Bronze for the women's basketball team.
- Our teams also made us proud during BUTISA bronze games buy collecting the highest points thereby landing the institution in the first position among 8-member Institution.

Category of Activity	Activities Carried Out	Number of Students
Assisted		
Career Guidance	Public lectures/Career guidance presentations (5)	947
	Short seminars (1)	235
	Mock interviews sessions (1)	387
Student Employment	Part-time jobs	35
	Graduate leadership	21
	Industrial attachment	38
Others	Sponsorship	7
	Vendors' licenses	12
Total assisted		1682

Health

The Clinic continued to offer preventive, curative and emergency care to the NUST community, which includes both students and staff members. This saw 4583 clients being treated for various ailments, compared to 3987 in 2018. There were 104 clients referred to different local hospitals, with five admissions and no fatalities. The Clinic continued to offer, Family Planning and HIV Testing services and those who were HIV positive were initiated on ART. Two Health and Wellness Ex-

pos were conducted in collaboration with various stakeholders.

Career guidance and employment

The Table below is a summary of the services that were provided by the Career Guidance and Employment portfolio of the Division of Student Affairs.

Table 1: Career Guidance and Employment Statistics, 2019

Residences, Campus life and Catering

Student accommodation continued to be a challenge at NUST and there was no increase in the number of bed spaces

during the period under review. Plans of a joint venture between NUST and Pretoria Portland Cement (PPC) to build hostels did not materialize.

An improvement was made to the selection of applicants, by replacing the manual draw with an automated random selector. On-campus, catering services were increased by one service provider to four from June 2019. The increase in inflation in 2019 resulted in accommodation rentals soaring, with most landlords demanding foreign currency. Four meetings with landlords were held at which students' welfare was discussed, and landlords committed to continuously improve study and living conditions.

Division continued in its efforts to improve campus life through various clubs and societies; and continuous dialogue with transporters. Some highlights of activities were:

- ENACTUS Club of NUST did well in pitching social impact projects at the Delta Ethics Competitions in Harare in October 2019.
- Two students came first in the ZIMCODD Tertiary Institutions Debate Competitions in Harare and successfully represented Zimbabwe in Tanzania, winning two Gold Shields as First Prize Awards.
- NUST students were the only students selected for the United Nations Academic Impact Millennium Fellowship and they did very well in the programme.
- The government's subsidized bus-transport system became functional in transporting students at much lower rates compared to charges by private service providers.
- The Red Cross Club of NUST show-cased their skills indicating an improvement in disaster preparedness of the University. A baseline research revealed that there were fifty students with various disabilities that would impact the teaching and learning processes. The identified disabilities were distributed as follows: Mental challenges,8%; Speech impairment, 2%; Hearing impairment 4%; Physical disability, 19%; Albinism, 8% and Visual impairment, 59%.

Chaplaincy

The Chaplaincy office continued with its principal responsibilities and effectively offered the following services: spiritual counseling to students and staff; advisory services on ecumenical matters; spirituality services on campus; resource mobilization for the needy students and support for International students

One hundred and forty (140) students were offered special support in areas ranging from delinquent behavior to suicidal tendencies. There was a decline in the in the number of such consultations compared to previous years.

Much was achieved promote spirituality, through the various activities of the thirty-one registered on-campus ministries that have linkages with their main churches in Zimbabwe. Leaders from these churches attended a capacity development training organized by the Chaplaincy Office, to equip them for effective management of on-campus ministry activities. The University still does not have a Chapel where the students and staff can enjoy worship. However, one ecumenical body (EFZ) pledged support in fundraising for the building of the chapel. The University Choir participated at the 25th NUST Convocation, with great enthusiasm and funfair.

Table 2 below shows the level of sponsorship by various organizations, through the Chaplain's Office.

Institution	Number of students
Higher Life Foundation	299
Anglo-American Chairman's Fund	6
Campaign for Female Education (Camfed) Fund	4
Independent Philanthropists	21
MHTEIS&TD	6
TOTAL	336

 Table 2: Voluntary Sponsorships

International liaison support to students

The Chaplaincy Office facilitated the regularization of all the immigration protocol for all 39 International students.

CONCLUSION

The Division of Student Affairs is always fascinated to see new programmes and activities that are developed and implemented by the enthusi-

astic and passionate team, through its service sections. The Dean and staff, in the Division of Student Affairs, look forward to a prosperous and progressive 2020.

Dr Sibongile Kamusoko Dean of Students

Dean
Prof D J Hlatywayo

FACULTY OF APPLIED SCIENCE



Applied Biology students in the Laboratory

ACADEMIC UNITS

he Faculty of Applied Science has embraced the philosophy enshrined in Education 5.0 with activities in Teaching, Research, Community Engagement, Innovation and Industrialization. There were ten Departments that focused in the following areas:- Applied Biology and Biochemistry, Applied Physics, Applied Mathematics, Computer Science, Radiography, Statistics and Operations Research, Sports Science and Coaching, Applied Chemistry, Environmental Science and Health, and Forest Resources and Wildlife Management. The Faculty sought to enhance collaboration with other Faculties, Universities, Industry and Non-governmental Organisations particularly in research. Twenty nine (29) accredited programmes, (16 Under-Graduate and 13 Post-Graduate), were operational in the Faculty.

The Faculty graduated 562 graduates (first degree) of whom 45% were female and 94 post-graduate Masters Degree students with a female content of 37%.

		i acarej.								
				STATISTIC	S FOR FAS 2019					
DEPARTMENT	STAFF COMPLEMENT						ENT ENROLME			
	ESTABLISHMENT	,	IN-POST		DEGREE PROGRAMME	UNDERGRA	DUATE	POST-GRAI	DUATE	Grand Total
	ACADEMIC STAFF	SUPPORT STAFF	ACADEMIC STAFF	SUPPORT STAFF		STUDENT N	UMBERS	STUDENT NUM	MBERS	
						FEMALE	MALE	FEMALE	MALE	
SBB	19	13	18	13	BSc (Hons) Applied Biology and Bio- chemistry	335	189	-	-	524
					BSC (Hons) in Technology	95	38	-	-	133
					MSc in Microbiology and Biotechnology	-	-	16	20	36
SCH	13	10	12	10	BSc (Hons) Applied Chemistry	71	83	-	-	154
					MSc in Analytical Chemistry	-	-	new	new	
l										
SPH	33	12	22	11	BSc (Hons) Earth Sciences	23	13	-	-	36
					BSc (Hons) Applied Physics	23	62	-	-	85
					MSc in Geophysics	-	-	-	-	
					MSc in Medical Physics	-	-	09	24	33
					MSc in Lasers and Applied Physics	-	-	0	2	02
SRA	12	1	8		Bsc (Hons) in Radiography	70	70			140
					BSc Special Hons in Radiography	-	-	-	-	
					MSc in Medical Ultrasound	-	-	44	39	83
					MSc in Radiography	-	-	-	-	
SMA	19	3	12	2	BSc (Hons) in Applied Mathematics	29	67	-	-	96
					MSc in Mathematical Modelling			1	9	10
SORS	16	2	14	2	BSc (Hons) in Operations Research and Statistics	161	199			360
					BSc Special Hons in Operations Research and Statistics	0	0	-	-	
					MSc in Statistics and Operations Research			24	35	59
SCS	20	7	15	7	BSc (Hons) in Computer Science	117	308			425
I		1			BSc (Hons) in Informatics	113	216	1		329
I					MSc in Computer Science			0	0	
					MSc in Information Systems			10	21	31
					,					
SSC	11	5	5	2	BSc (Hons) in Sports Science and Coaching	179	156			335

ESH	15	7	9	7	BSc (Hons) in Environmental Science and Health	298	147			445
					BSc (Hons) in Public Health	213	113			326
					MSc in Environmental Health			27	30	57
EFW	13	5	12	3	BSc (Hons) in Forest Resources and Wildlife Management	54	55			109
					MSc in Ecotourism and Biodiversity			9	7	16
					BSc (Hons) in Forest Resources and Wildlife Management	54			55	
					MSc in Ecotourism and Biodiversity			9	7	16
Totals	171	65	127	57		1781	1716	140	187	3824

SBB- Applied Biology and Biochemistry

SORS- Statistics and Operations Research

SCS - Computer Science

SCH- Applied Chemistry

SMA - Applied Mathematics

SRA - Radiography

SPH - Applied Physics

SSC - Sports Science and Coaching

ESH - Environmental Science and Health

EFW - Forest Resources and Wildlife Management

Of the 171 academic staff posts on the establishment, there were only 65 in post. The vacant posts were a result of the reigning employment freeze. There were only two resignations that were quickly replaced. Five academic staff members enrolled for the Post-graduate Diploma in Education – a Diploma program that offers training in teaching to lecturers. Thirty one (31) lecturers were pursuing PhD studies on part-time while six spent the year on Sabbatical Leave.

STUDENTS

Student enrolment stood at 3824 for both undergraduate and postgraduate levels. This was as a result of efforts made to penetrate the market with NUST programmes and re-branding these programmes to respond to the demands and needs of the industry.

The Faculty graduated 562 graduates (first degree) of whom 45% were female and 94 post-graduate Masters Degree students with a female content of 37%.

TEACHING and LEARNING

Despite poor resources efforts to render a high standard in teaching and learning experience were high on the agenda. Departments embraced contemporary teaching methods to enhance learning and improve the pass rates. Thirty-five students, who were among the graduates in the Faculty, received their Degree Certificates with numerous accolades.

The Faculty endeavoured and encouraged diversity in teaching and learning within Departments. A number of lecturers embraced technology in the use of electronic learning platforms like Sakai and Google Classroom. Departments also started synergizing in co-taught modules as a way of offering an attractive learning experience to students.

All programmes were reviewed and aligned to the ZIMCHE requirements for module Minimum Body of Knowledge (MBK) for the degree programmes. In three Departments, Industry was consulted through Advisory Board Meetings in the Departments.

RESEARCH

Research in the Faculty was carried out with scanty resources. The desire and zeal to carry out research did exist in the Departments. Thirteen Research Clusters / Groups remained operational to the end of the year. Both inter-departmental and inter-faculty collaboration was encouraged. The results of their activities are yet to be realized in the form of publications and possible innovations – especially over the following twelve months. Collaborations included the following bodies: ZimChem Refineries, IAEA, Premier Services Medical Investments (PSMI), Central Veterinary Laboratories (CVL), Criminal Investigation Department (CID), National Microbiology Reference Laboratory (NMRL), National Biotechnology Authority (NBA), Medical School (UZ), Nelson Mandela Metropolitan University, University of Johannesburg and Stellenbosch University.

The Applied Geophysics Research Group in the Department of Applied Physics received a Research Grant of US\$42000.00 from the International Science Programs (ISP) Uppsala University in Sweden for the year 2019. AFRA National and Regional research activities that are coordinated by Applied Physics Department received funding to the tune of Euro 4000 over the period. The Ecotoxicology Research Group in the Department of Applied Biology & Biochemistry received a grant of USD 34000.00 from ISP at Uppsala University, Sweden. The Department of Forest Resources & Wildlife Management runs a collaborative research that is sponsored by SIRAD in excess of USD 25000.00. Work carried out under AFRA has already aroused interest with United Refineries (Zimbabwe), who require scientific/

technical solutions to problems encountered in their distillation columns/systems.

Computer Science Department was the first Research Group to establish an office at the **NUST INNOVATION HUB** with research activities in Software Development. A Software Development Centre was set up at the HUB in November 2019.

The Faculty provided scientific knowledge and solutions to challenges faced by communities and Industry in Bulawayo. The Geophysics Research Group offered quality advice and service on underground water in Bulawayo; Applied Chemistry and the Department of Environmental Science & Health carried out water analysis for the Bulawayo City Council (BCC) on the Industrial and Residential Ground water as well as effluent monitoring at Kango Products (Industry).

The Department of Environmental Science & Health successfully hosted World Environmental Health Day 2019 at NUST. The following organizations collaborated with the Department: Zimbabwe Environmental Health Practitioners Association, the International Federation of Environmental Health (IFEH), MoHCC, EMA, BCC, Zimbabwe School of Mines, Bulawayo Polytechnic College, Climate Change Coalition and Green-cycle Solution. The function carried NUST on to the International arena on health matters. The Department went on to conduct an awareness campaign on asthma and allergies in Gwanda City. In addition, the Department was active in the National Clean-up Events in Bulawayo and participated in the Community and Schools engagement through the Bulawayo Waste Improvement Forum.

The National University of Science & Technology Schools Enhancement Program (NUSTSEP) scaled down a number of its activities due to funding constraints. However, its sister organ, the National University of Science and Technology Schools Enrichment Centre (NUSTSEC) operating from No 55 Jaison Moyo in Bulawayo recorded increases in the number of clients who patronized the Centre.

CHALLENGES

The Faculty was not spared from the effects of the nation-wide austerity measures introduced by Government on financial budgets. This meant that laboratories operated below capacity with insufficient equipment. The Faculty ran on an academic staff vacancy rate of 26%. This tended to compromise the quality of practical sessions in the laboratory as well as reduce the standard of the outputs from Research Projects. The major effect was the inability by Faculty to achieve the University Strategic Objectives where these required input from both students and lecturers working on Research in the laboratories.

Both sports facilities and sporting equipment continued to be a major challenge to the activities of the Department of Sports Science and Coaching. Facilities were hired from off Campus and inadequate transport facilities compounded the already compromised mode of operations.

The Faculty also experienced manpower shortages that resulted from the employment freeze. A number of vacant posts were serviced by part-time lecturers from outside the University. With staff shortages and ad-hoc mitigating strategies, there is bound to be a compromise in the standards in teaching delivery and learning experience.

Due to financial constraints, NUSTSEP was forced to scale down their activities and confine their activities to Bulawayo Urban Districts. By the end of the year, NUSTSEP activities had almost ceased running.

PLANS

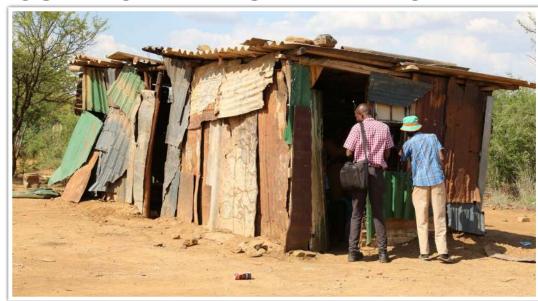
The Faculty of Applied Science will:-

- 1. strive to improve the quality and increase the quantity of research that impacts positively on society in particular, the Bulawayo community.
- 2. innovate teaching and learning on the Faculty of Applied Science (FAS) programmes to carter for the needs of industry and society in general.
- 3. embark upon an aggressive international student recruitment campaign to improve the Regional and International standing of the Faculty, and indeed, NUST.



Dean B Gaule

FACULTY OF THE BUILT ENVIRONMENT



Community engagement: Laud department visiting the squatters at Killarny.

1.1 Introduction

Brief Overview:

he Faculty of the Built Environment comprises three Departments: Architecture, Construction Economics and Management (formerly Quantity Surveying), and Property Studies and Urban Design (formerly Landscape Architecture & Urban Design). In 2019 the Faculty offered academic programmes as shown in Table 1 with a staff complement shown in Table 2.

Table 1. Academic Programmes offered in 2019

No.	UNDERGRADUATE	DURATION	POSTGRADUATE	DURATION
1	Bachelor of Architectural Studies Honours	Five years of full-time	Master of Architecture	18 months Block release
2	Bachelor of Science in Property Development & Estate Management	Four years of full-time	Master of Urban Design	18 months Block release
3	Bachelor of Quantity Surveying	Four years of full-time	Master of Science in Construction Project Management	18 months Block release

Table 2. 2019 Vacant Posts in the Departments

POST	ARCHITECTURE		LANDSCAPE ARCHITECTURE & URBAN DESIGN		QUANTITY SURVEY- ING	
	Establish- ment	Vacant	Establish- ment	Vacant	Establish- ment	Vacant
Professor	2	1	1	1	1	1
Lecturer	20	8	10	5	12	5
Secretary	1	0	1	0	1	0
Technician	1	1	1	1	1	1

STAFF CAPACITY BUILDING

Five lecturers in the Faculty were undertaking their PhD studies and two have completed their programmes.

The NUST design team came first in the competition and was awarded the 1st prize of USD4000

1.3 Students

Table 3. 2019 UNDERGRADUATE STUDENTS

Year	DEPARTMENT					
	ARCHITECTURE	LANDSCAPE ARCHITECTURE & URBAN DESIGN	QUANTITY SURVEYING			
	Total	Total	Total			
1	47	107	104	258		
2	38	140	116	294		
3	47	148	151	346		
4	28	60	69	157		
5	32	-	-	32		
Total	192	455	440	1087		
Grand Total		1087				

Table 4. 2019 POSTGRADUATE STUDENTS

PART			TOTAL			
	ARCHITECTURE	LANDSCAPE ARCHITECTURE & URBAN DESIGN	QUANTITY SURVEYING			
	Total	Total	Total			
PART I	10	19	57	86		
PART II			15	15		
PART III	19	6	17	42		
Total	29	25	89	143		
Grand Total	143					

Table 5. 2019 GRADUATES

PART		DEPARTMENT				
	ARCHITECTURE	LANDSCAPE ARCHITECTURE & URBAN	_			
		DESIGN	SURVEYING			
	Total	Total	Total			
UNDERGRADUATE	17	104	67	188		
POSTGRADUATE	12	21	11	44		
Total	29	125	78	232		
Grand Total	232					

1.4 Teaching and Learning

In 2019 the Faculty's submisson on curricula review based on undergraduate and postgraduate programmes along with the ZIMCATS framework/guidelines and MBKs was approved, therefore in 2020 the Faculty will be offering general degrees.

1.5 Research

Conferences, Seminars and Workshops

- 1. Tirivavi Moyo, Gerrit Crafford and Fidelis Emuze (2019) Decent working conditions for improved construction labour productivity on Zimbabwean building projects: Acto Stuctilia Journal Vol 26 (2)
- 2. Tirivavi Moyo, Gerrit Crafford and Fidelis Emuze (2019) The influence of people-centred management aspects on construction workers' productivity in Zimbabwe 35th ARCOM Conference in Leeds, United Kingdom

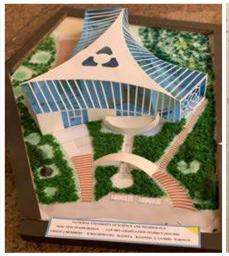
Conferences attended were as follows:

- World town Planning Day Victoria Falls, 7 November 2019
- Climate change Harare, 15 18 September 2019
- Geomatics Annual School Harare, 19 September 2019
- ZIRUP Annual School Masvingo, 21 24 August 2019

1. National Oil Infrastructure Company of Zimbabwe ZITF Pavilion Design Competition

The National Oil Company of Zimbabwe (NOIC) approached the Department requesting for designs for their ZITF 2020 pavilion. The Department assigned the Year 5 Bachelor of Architectural Studies Honours Degree students under the guidance of their Lecturers Arch I Ahmed, Arch B Madondo and Mrs S T Katurura to design the required pavilion. At the conclusion of the 1st phase of the design work NOIC then made the exercise into a design competition and awarded prizes to the tune of \$40000.

Below is one of the Design proposal presented





Mwamuka Shield First Place, Tanatswa dict Madzivire – Third Place.

2. Beta Holdings Annual Architectural Student Competition

Beta Holdings holds an annual Architectural Student Design Competition as part of their Corporate Social Responsibility. Initially the competition was open to NUST students and has grown over the years to incorporate students from the Polytechnics in Zimbabwe. The Year 5 Bachelor of Architectural Studies Honours Degree students participated in the competition together with other Architectural students from the Polytechnics in Zimbabwe. The NUST winners for the 2019 edition were Brighton Takudzwa Gondo – Vernon Benele Makumbe – Second Place and Tinashe Bene-







3. Dubai 2020 Expo Zimbabwe Pavilion Design Competition

The Government of Zimbabwe was invited by the Government of the United Arab Emirates to participate at the 2020 World Exposition (Expo 2020 Dubai) that will run from 20 October 2020 to 10 April 2021 in Dubai. It will offer Zimbabwe a good opportunity to showcase the country's developmental thrust and diverse trade, tourism and investment opportunities in various sectors and disciplines and our readiness to do business with the world.

The Dubai 2020 Expo places emphasis on the participation of Youth, hence the Office of the President and Cabinet (OPC) invited the Ministry of Higher and Tertiary education, Science and Technology Development to facilitate the participation of Universities in all the



programmes that relate to the Country's participation at Dubai 2020. The NUST design team came first in the competition and was awarded the 1st prize of USD4000.





Part of the Bachelor of Architectural Studies Honours Degree students receiving the prize for the pavilion design.

Below are pictures of the winning design which will be constructed in Dubai

information



4. Hillside DamsConservancy

NUST hosted a workshop in collaboration with Earth Building United Kingdom and Ireland (Ebuki) a national organisation in the UK working on earth as a highly sustainable and locally available construction material. Over the past 20 years or so there has been a lot of work

in research and development of earth both structurally and as a finish which has shown its unique characteristics not only to build and finish structures but also to improve indoor air quality and manage temperature through design with mass rather than with mechanical heating and cooling.

As part of the Year 2 Bachelor of Architectural Studies Degree Design Studio module on community projects, the students designed proposed guest accommodation for Hillside Dams Conservancy using earth and made presentations. Below is a picture of part of the students and models of selected designs.

5. Milton Junior Heritage Centre

The Milton Junior Heritage Centre design is based on the Year 1 Society and the Built Environment module and emanated from the Department's engagement with renowned historian Mr Phathisa Nyathi who would give lecture series seminars at Amagugu Heritage Centre in Matopos. Mr S Zavirima, a lecturer in the Department of Architecture together with Year 1 students Clive Ncube and Mthandazo Moyo worked on the proposed designs shown below.

EXPO 2020 DUBA



1.6 Outreach Programmes

1. Lupane Master Plan

The Faculty Consultancy Unit through LAUD has finally completed the drawings and boundary delimitations. This project is ongoing; there is finalisation of report of study.

2. Plumtree Master Plan

The Department of LAUD was still assisting Plum-

tree Town Council with its Local Development Plan. Plumtree was still facing challenges; the second phase of the Local Development Plan has not commenced.

1.7 Strategic Plan

- 1. Achieved improved quality education through curriculum review for both the undergraduate and postgraduate programmes curriculum. Review was done to meet the standards of knowledge attained.
- 2. Achieved increase in student enrolment through creation of new programmes.

Challenges

- 1. Learning space remains very critical owing to the large enrolment. The available space can not accommodate the size of the classes.
- 2. Field trips have also been affected with the significant enrollment figures as sourcing transport with the limited resources (financial). Students were not exposed to as much outdoor learning experiences as required.
- 3. Lecturer student ratios are still too high considering the practical nature of our programmes. It has been proving difficult to fill in the vacant lectureship posts. (Departments continue to engage temporary-Fulltime Lecturers and Part-Time Lecturers to complement the existing staff)
- 4. Lack of equipment and office spaces incapacitates lectures. It has been difficult to procure the requisite teaching equipment due to financial and budget constraints.

Plans

- 1. To recruit more staff for the existing programmes so that the student lecturer ratios are at acceptable regional and international levels.
- 2. To run the Bachelor of Science Construction Management Honours Degree Programme.
- 3. The Faculty intends to introduce the Department of Construction Management by 2020.
- 4. Academic collaboration with Faculty of Architecture at the Technical University of Munich, Germany.
- 5. Get members from the Department of Architecture registered as Associate members with the Institute of Architects of Zimbabwe for all members of staff.
- 6. Pursue MOU with Beta Holdings.



Dr P Nkala

Various depart-

ments in the

Faculty are slowly

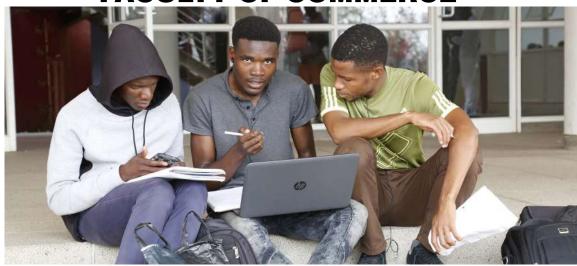
but surely moving

towards E-learning

platforms, with

notable example

FACULTY OF COMMERCE



Students studying

INTRODUCTION

his report summarises the major events and activities related to teaching and learning, research and community engagement in the Faculty of Commerce for the year 2019. The report draws inputs from Chairpersons of six Departments, the Directors of the Graduate School and Institute of Development Studies, which together, make up the Faculty of Commerce.

OVERVIEW OF THE FACULTY

In terms of student numbers, the Faculty of Commerce remains the largest of the seven Facthe Department of ulties comprising the University. As in previous years, this fact is starkly reflected in the Marketing being a numbers that graduate each year. For 2019, the Faculty contributed 1137 of the 2652 (which translates to 43%) students who graduated (Graduation statistics are presented elsewhere in this report) The Faculty continues to attract large numbers of candidates despite numerous other local universities offering similar programmes; owing to the NUST brand that is held in high esteem by the market, a brand to which it has contributed immensely over the years. It should be highlighted that the Faculty always endeavours and continues to equip learners with relevant and twenty-first century business and developmental skills and knowledge as well as other attributes that are needed in today's cut throat economies. As a result, students in the Faculty's eight units; i.e. in the six Departments (Accounting, Banking, Finance, Insurance and Actuarial Science, Management and Marketing) as well as in the Graduate School of Business (GSB) and the Institute of Development Studies (IDS), are preferred candidates for employment, innovation and industrialisation, locally and internationally.

STAFFING

As in previous years, the Faculty continued to face staffing challenges in 2019 as evidenced by the fact that all Professorial posts in all Departments remained vacant throughout the year as seen in table 1 below.

Table 1-Departmental Academic Establishments and Vacancy levels – (Combined for the Departments of Accounting, Banking, Insurance & Actuarial Science, Finance, Management and Marketing)

Post	Establishment	Filled	Vacant	Vacancy Rate (%)
Professor	7	0	7	100
Lecturers	82	75	7	9

Teaching Assis-	34	13	21	62
tants				
Staff Development Fellows	4	0	4	100
Total	127	88	39	31

On a positive note however, nine (9) staff members completed their doctoral studies in 2019 thus slightly raising the bar in terms of qualifications of members of staff

in the Faculty. There is also a significant number of staff members who are enrolled for doctoral degrees in various universities, and this should further improve the qualifications of staff members in the near future. The table below is a summary of the details of the staff members who attained their PhDs in 2019.

Table 2 – 2019 Staff members PhD Graduates

Name	Name Area of Study		1 1 - 1		Awarding Insti- tution	Thesis Title	Date Graduated	
Ian Ndlovu	PhD in Management Studies (Finance)	Banking	University of South Africa	Commodity Price Volatility, Stock Market Performance and Economic Growth: Evidence from BRICS coun- tries.	20 November 2019			
Fainos Chin- jova	PhD in Business Administration	Graduate School of Business	Zimbabwe Open University	Assessment of the effectiveness of strategies implemented by the Government to revive the manufacturing sector in Bulawayo Metropolitan Province during the period 2009 to 2017.	28 November 2019			
Kudakwashe Chirambwi	PhD in Peace Studies	Business Manage- ment	University of Bradford, UK	The political economy of policing in Zimbabwe: Changing roles, practice and identities in relationship to peace, security and development.	18 July 2019			
Ndakaitei Makwanise	PhD in Management Sciences (Public Administration).	Business Management	Durban University of Technology, South Africa	Combating School related Gender based violence in Bulawayo's Mpopo- ma area.	14 August 2019			
Daisy Ifeoma Odunze		Marketing	University of Free State, South Africa	Analysis of the impact of entrepreneur- ship in agribusiness value chains on household food security levels, con- straints, prospects and policies.	28 June 2019.			
Judith Char- umbira		Marketing	University of Lusa- ka, Zambia	The impact of upstream supply chain coordination on the performance of Zimbabwean agro-processing organization.	7 November 2019			
Lifa Maposa	PhD in Finance	Finance	University of Lusa- ka, Zambia	Investigating the relationship between mandatory contractual savings and capital market development: a focus on Sub-Saharan countries (1990-2018).	7 November 2019			
Samson Mtisis	Doctor of Philosophy Degree in Business Management	Business Management	NUST, GSB	The Design and Delivery of Successful Rural Enterprise Business Develop- ment Support Programmes				

On a sad note, the Faculty lost one of its bright stars in Miss Siphosenkosi Dube Swene, who was a Lecturer in the Department of Insurance and Actuarial Science. She died on the 2nd of December 2019 and was laid to rest on the 5th of December 2019 at Athlone Cemetery.

TEACHING AND LEARNING

Teaching and learning progressed relatively well throughout the year. Various departments in the Faculty are slowly but surely moving towards E-learning platforms, with the Department of Marketing being a notable example. However, as mentioned in the 2018 report, progress in moving away from orthodox to modern teaching and learning approaches.is hindered by lack of resources like modern delivery equipment such as interactive boards, laptops and projectors. The Faculty would like to reiterate that the serious shortage of computers and computer laboratories for practical courses requires urgent attention if the University is to attain world-class university status.

Other challenges included damaged electric sockets in some classrooms, scarcity of classrooms and furniture resulting in at least one department having to outsource teaching space for their block release programmes at the beginning of the year for their Bulawayo classes. Teaching (especially computer laboratories) and examination space as well as high rental challenges for the MSc cohorts were also experienced in Harare by some departments.

In 2019, one thousand one hundred and thirty seven (1137) students graduated in the Faculty of Commerce. Of these, seven hundred and forty two (742) graduated with various Bachelor of Commerce honours degrees in the departments of Accounting, Insurance and Actuarial Science, Banking, Finance, Management and Marketing respectively. The Department of Accounting recorded the highest number (196) of graduates while the Department of Management had the lowest (65). The Graduate School of Business contributed four (4) PhD graduates.

Of those who graduated with Bachelor of Commerce honours degrees, almost 49% were males while just over 51% were females, a welcome development in the recruitment of students for these programmes as the ratio is almost in tandem with the gender demographics in the country.

For the Masters degrees, just over 53% were males while just under 47% were females. Of the four PhD graduates, 75% were males while only 25% were female. It should be noted that at least one the PhD graduates is a member of Staff in the university.

The rest of the graduation statistics are summarised below

Table 3 2019 Graduation statistics

a) Undergraduate Graduation statistics - 2019

Bachelor of Commerce Programmes	Total
Accounting	196
Actuarial Science	11
Banking	5
Banking and Investment Management	85
Finance	82
Fiscal Studies	25
Human Resources Management	63
Management	2
Marketing	93
Risk Management and Insurance* (includes 40 from BAISAGO University)	174
Total	742

Teaching and learning progressed relatively well throughout the year. Various departments in the Faculty are slowly but surely moving towards E-learning platforms, with the Department of Marketing being a notable example.

b) Postgraduate Graduation statistics - 2019

Department	Programme	Total
Accounting	MSc in Accounting and Finance	20
Banking	MSc in Banking and Financial Economics	38
Institute of Development Studies	MSc in Development Studies	55
_	MSc in Disaster management	33
Finance	MSc in Finance and Investment	51
	MSc in Financial Engineering	6
	MSc in Fiscal Studies	2
Insurance and Actuarial Science	MSc in Risk Management and Insurance	21
Marketing	MSc in Marketing	27
Graduate School of Business	MBA – General	124
	MBA – Public Management in collaboration with ZIPAM	14
	PhD in Business Administration	4
Total		395

STUDENT ENROLMENT

From Table 4 it can be seen that the total number of registered students in all the different departments/units was 4923, which represents a 14% increase on the 4 318 for 2018. Of the 4923, 65% were undergraduates with the Department of Accounting (25%), contributing the highest number of undergraduate students in 2019. It is envisaged that other Departments, for example the Department of Finance (4 new programmes), the Department of Banking (1), the Department of Management (1) and the Department of Marketing (1) should also contribute higher numbers in future as they are planning to submit proposals for new programmes to ZIMCHE in 2020, after the proposed programmes were approved by the Academic board. The department of Finance is also in the process of refining four new proposals for undergraduate degrees which were

Table 4: Summary of Numbers of Students in the Faculty in 2019

a) Undergraduate Honours degrees Enrolment statistics - 2019

	Programme	Part 1	Part 2	Part 3	Part 4	Total
1	Accounting	177	204	200	205	786
2	Actuarial Science	18	12	25	17	72
3	Banking	95	165	99	99	458
4	Risk Man- agement and Insurance	128	136	144	159	567
5	Finance	234	136	115	92	577
6	Fiscal Studies	44	30	22	30	127
7	Management					276
8	Marketing	52	70	97	103	322
Total						3 185

b) Postgraduate degrees Enrolment statistics - 2019

* A detailed report for this unit was submitted separately

	Department/unit	Stage 1	Stage 2	Stage 3	Stage 4	Total
1	Accounting					
	MSc	78	22	30	20	150
	CTA	25	0	0	0	25
2	Banking	-	59	45	40	144
3	Insurance & Actuarial Science	78	-	23	22	123
4	Finance					
	MSc Finance & Investment	129	99	99	107	434
	MSc Financial Engineering	35	18	18	7	78
	MSc Fiscal Studies	19	32	-	-	54
5	Marketing	19	32	-	-	51
6	GSB*					
	MBA					433
	PhD					17
7	IDS*					
	Diploma					11
	MSc					192
	MPhil					4
	PhD					22
Total						1 738

RESEARCH AND SCHOLARSHIP

The Institute of Development Studies led other units in research and scholarship in the Faculty in 2019. However, securing significant grants remained elusive in 2019 despite several efforts being made. Collaboration with the World Food Programme (WFP), under which 6 Seasonal Livelihoods Programming (SLPs) workshops were conducted successfully in six districts across the country contributed to research output and funding four MPhil candidates. Community Based Participatory Planning (CBPP) and the Hwange Livelihood project (funded under an agreement with CIRAD) also pro-

gressed well, with one M.Phil. student being engaged by the project

The Faculty office continues to encourage other departments/units to take research and community scholarly engagement seriously and to consider novel ways of funding such activities in the face of the current economic and financial challenges that the university and country at large face. Table 5 gives details of various categories of publications produced by staff in 2019.

On the students' research front, five (5) students (3 from the B. Com Finance programme and two from the B Com Banking and Investment Management programme) put the Faculty on both the national and international map by winning the CFA Research CHALLENGE Competition for the second time in a row (nationally) and also participating in the 13th chapter of the EMEA Region competition in Zurich, Switzerland on the 10-12th April 2019. The department of Finance also facilitated a Tax seminar which was hosted by the Faculty on 20th November 2019

Table 5: Number of Research Papers in the Faculty of Commerce in 2019

Department/Unit	Type of paper/publication					
	Conference	Non-peer reviewed	Peer-reviewed	Book Chapters		
Accounting	0	0	0	0	0	
Banking	0	0	0	0	0	
Finance	7	0	2	0	9	
Management	2	0		2	4	
Marketing	0	0	2	0	2	
Risk Management and Insurance	0	0	0	0	0	
Graduate School of Business	2	0	2	0	4	
Institute of Development Studies	15	0	8	0	23	
Total	26	0	14	2	42	

THE STRATEGIC PLAN

The Faculty will endeavour to do all it can to achieve its set objectives and goals in order to contribute positively to the university's quest to achieve its Strategic Plan. It is hoped that resources that are needed for such to happen will be secured through partnerships and collaborations. Through its various units, a number of MOUs and similar arrangements have been entered into.

Partnerships/collaborations

The Faculty maintained existing, and continues to seek, new collaborative partnerships to ensure realisation of the university's strategic plan. For example, the GSB set up a Joshua Nkomo Leadership and Governance Institute while the Department of Finance partnered Africa Growth institute in hosting the 16th Annual African Finance journal conference in May 2019 while the department of Finance collaborated with IPAZ resulting in five students from two departments in the Faculty being funded to travel to Switzerland for the CFA challenge competition. In that regard, it will continue to intentionally encourage Departments to revive Departmental Advisory Boards as these could be potential platforms towards unlocking desperately needed resources from both the private and public sectors of the economy. Departments are also encouraged to desist from the silo mentality and espouse interdepartmental and inter-faculty collaborations in new programme development, programme rebranding and research activities.

THE FUTURE

The Faculty sees itself growing even bigger quantitatively and qualitatively through the introduction of new Education 5.0 compliant programmes at both the undergraduate and postgraduate levels (already, the GSB introduced an MBA in Leadership and Governance – two essential pillars of a successful economy) as well as opening satellite campuses in other centres, especially in Harare where there is a huge opportunity because of sheer numbers of people and also from the fact that our brand is strong.

Schools (e.g. school of finance and fiscal studies) are also on the cards and their realisation is contingent on ZIMCHE approving programmes that will form the basis of the creation of such schools.

Equally important, the Faculty aims at increasing its visibility and footprint in research, entrepreneurship training, innovation and industrialisation of the economy in keeping with the pillars of Education 5.0. As a result, we consider the NUST Innovation Hub to have come at an opportune time and are committed to working with the Innovation Hub office to contribute our fair share towards solving the economic challenges that the country is facing for the attainment

of vision 2030.

To that end staff will be encouraged to secure research funds and engage in applied research, departments will be encouraged to increase international student populations and to engage with local, national and international communities in partnerships and collaborations in order to raise funds that are necessary to carry out the necessary research and training. To improve the quality of staff qualifications, publications and scholarship in the Faculty, we will advocate for increased mentoring of doctoral candidates through thesis by publication.

Director Ambassador M Ngulani

GRADUATE SCHOOL OF BUSINESS



INTRODUCTION

he year 2019 was a very busy one for the School. For the first time in a long while, the School ran all degree programmes in all their different stages. These include the flagship General Master of Business Administration (GMBA), Executive Master of Business Administration in Strategic Management (SMBA). The School also had a number of candidates at various levels of completion in both the Doctor of Philosophy in Business Administration and Doctor of Philosophy in African Leadership Development degree programmes, but with the majority of candidates being in the PhD in Business Administration programme.

In 2020 the School plans to hold a Strategic Planning workshop that will be aimed at chatting a future for the unit

STAFFING

Staffing for both academic and administrative positions remained the same as per previous year, except that one Senior Lecturer resigned suddenly in January 2020. The School continued using services of part-time lecturers for some of the modules. Use of part-time lecturers is a feature of MBA education as it may not be economically viable to employ someone for just one specialist module. The staffing levels were as per Table 1:

Table 1: Staffing Levels

-	MALE	FEMALE	TOTAL
Academic staff	12	2	14
Administrative staff	-	3	3
GRAND TOTAL	12	5	17

Two members of the academic staff graduated with a Doctor of Philosophy in Business Administration degree from local universities in 2019, while three others are still pursuing their doctoral studies. The School needs to recruit PhD-holder lecturers for

Marketing, Strategic, Management, Accounting and Finance, and Leadership and Corporate Governance.

1.3 STUDENTS

The total student enrolment in the School in 2019 was as shown in Table 2.

Table 2: 2019 Enrolment

PROGRAMME	MALES	FEMALES	TOTAL
EMBA	18	7	25
GMBA	168	111	279
SMBA	65	38	103
PhD in African Leadership	2	1	3
PhD in Business Administration	12	2	14
PUMBA	19	7	26
GRAND TOTAL	284	166	450

Graduation

Graduation statistics for 2019 are as shown in Table 3.

Table 3: 2019 Graduation Figures

Teaching and Learning

SMBA	65	38	103	PROGRAMME	MALES	FEMALES	TOTAL
PhD in African Lead-	2	1	3	EMBA	0	0	0
ership				GMBA	73	51	124
PhD in Business Ad-	12	2	14	SMBA	0	0	0
ministration				PhD in African	0	0	0
PUMBA	19	7	26	Leadership			
GRAND TOTAL	284	166	450	PhD in Business	3	1	4
	•	•	•	Administration			
Tanahina staff aant	inua ta an	anga with a	laamina	PUMBA	8	6	14
Teaching staff continue to engage with e-learning				GRAND TOTAL	84	58	142
methodologies. Ho	methodologies. However, the School does not yet offer						

truly blended learning where some modules can be offered with students away from the classroom. Distinction pass rates are still low since the introduction of 80% as the distinction pass mark by the Zimbabwe Council for Higher Education (ZIMCHE) for all Masters degree programmes. Lecturers may still be adjusting to the new grading system.

1.5 Research

Two papers were published within the School, with two conference attendances where two papers were presented.

1.6 **Outreach Programmes**

There were no outreach programmes during 2019.

1.7 Strategic Plan

The School furthered the University's Strategic 4 Pillar of widening and deepening access to education by getting a new degree programme approved – a Master of Business Administration in Leadership and Governance degree and also by setting up the Joshua Nkomo Leadership and Governance Institute.

1.7 Challenges

Due to financial constraints, the School could not purchase needed teaching and research resources such as some software, laptops, white boards, interactive boards and bond paper.

1.8 **Plans**

In 2020 the School plans to hold a Strategic Planning workshop that will be aimed at chatting a future for the unit.

Director Dr C Mabhena

INSTITUTE OF DEVELOPMENT STUDIES



Nust MoU with WFP: Delegates who attended the Workshop on Seasonal Live hood programme.

1. INTRODUCTION

he year 2019 was the 9th anniversary of the Institute of Development Studies (IDS) during which research; teaching and scholarly community engagement took varied outcomes, amid different funding related challenges. The new strategic plan of the university guided all the activates. The year 2019 was a tough year in terms of funding though substantial work was done on scholarly community engagement and research, thanks to the implementation of the MOU signed in January 2019 between IDS-NUST and WFP. Teaching progressed smoothly throughout the year. This report as a contribution to the Vice-Chancellor's report summarises research, teaching and other departmental endeavours by members of both academic and non-academic staff at IDS-NUST in 2019 as well as articulates strategies for the future.

2. RESEARCH

- Interest in research at IDS continued in the fields of natural and environmental resources, livelihoods, disaster risk reduction, rural development and remittances among others. Multi-million dollar grants remained elusive in 2019 despite several efforts towards grant winning proposals by researchers at IDS.
- The 3 pronged approach (3PA) in collaboration with the World Food Programme was the major output of the Institute in 2019. Under this project 6 Seasonal Livelihoods Programming (SLPs) workshops were conducted successfully in the following districts: Urban; Chimanimani, Chipinge, Kariba and Mzilikazi: Rural: Chipinge, Nkayi, Gokwe North. Community Based Participatory Planning (CBPP) was conducted in Rushinga and Masvingo districts and these targeted 6 wards. Four Master of Philosophy candidates are working their dissertations around the 3PA and are funded by WFP
- The Hwange Livelihood project, that is Human Wildlife conflict project under Prosuli funded under our agreement with CIRAD progressed well and detailed reports are available on request. This project also engaged one M.Phil. student

2.1 Seminars and Conference

Ninety per cent of staff presented papers in conferences/workshops in Zimbabwe and South Africa (refer to monitoring and evaluation report 2019)

2.2 Publications in 2018/19

The Institute published 8 research articles in referred journals (see monitoring and evaluation report (2019)

3.0: TEACHING and LEARNING

The year 2019
was a tough year
in terms of funding
though substantial
work was done on
scholarly community
engagement and
research, thanks to
the implementation
of the MOU signed
in January 2019
between IDS-NUST

and WFP

3.1 Staff

At the end of 2019, the Institute had a staff compliment of twenty four, comprising sixteen Academic and eight non-academic staff, respectively. This the full complement as per establishment

3.2 Staff academic achievements

- Dr Z L Dube was nominated the Country chair for Global Business and Association Technology (GBATA).
- One staff member attained his PhD in Disaster Management from the University of the Free State in South Africa.

3.3 Programmes and Student Intakes

Table 1:2019/2020 Academic year

PROGRAMME	PART ONE		PART THREE			GRAND TOTAL	
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	1
PhD Development Studies	13	5	18				18
PhD Disaster Management	1	3	4				4
MPhil Development Studies	1	1	2				2
MPhil Disaster Management	1	1	2				2
MSc Development Studies (Bulawayo)	14	27	41	6	15	21	62
MSc Development Studies (Harare)	15	10	25	11	9	20	45
MSc Disaster Management (Bulawayo)	16	11	27	13	9	22	49
MSc Disaster Management (Harare)	13	7	20	9	7	16	36
Diploma in Development Studies				6	5	11	11
TOTAL	74	65	139	45	45	90	229

I believe the wealth of knowledge in the Institute, coupled with development practice experience, the Institute is geared towards promoting cutting edge research in conjunction with other Faculties at NUST, public and private organisations.

3:4 Gender distribution of the number of graduands in 2019

Table 2: Gender distribution of the number of graduated students in 2019

PROGRAMME	MALE	FEMALE	TOTAL
MSc Development Studies	25	30	55
MSc Disaster Management	15	18	33
Diploma in Development Studies	01	01	02
TOTAL	41(54%)	49 (46%)	90

As depicted in table 2above, 54% of graduates were male and 46% female.

4.0 Contribution to NUST Strategic Plan 2019-2023

The Institute is already contributing immensely to the above as shown by the number of MOUs entered into with different International and Local Development Organisations such as WFP, Plan International, CIRAD, Sexual Rights Centre, ORAP and Jairos Jiri. WFP and the Sexual Rights Centre have donated research and teaching equipment to the Institute to argument limited resources from the university

5.0 STRATEGIES FOR THE FUTURE

Given the increasing number of doctoral holders and registered doctoral candidates among staff, the future of IDS-NUST is bright. With the new trust of applied research that will solve developmental challenges IDS-NUST is ready to hit the ground running in the next few months. I believe the wealth of knowledge in the Institute, coupled with development practice experience, the Institute is geared towards promoting cutting edge research in conjunction with other Faculties at NUST, public and private organisations. Furthermore higher qualifications should translate into improvement in scientific writing and research skills critical for competitiveness and winning of research grants and realisation of ground-breaking research and publications by IDS-NUST. Various collaborative arrangements, conference activities and other interactions by IDS-NUST staff, is encouraged to increase visibility of IDS-NUST as a research institute in Zimbabwe and outside. These strategies and activities are already captured in our 2020 action plan.

Compiled by:
Dr Clifford Mabhena
DIRECTOR

Dean Dr S Chabikwa

FACULTY OF COMMUNICATION AND INFORMATION SCIENCE



Nust Students.

Introduction

he year under review was characterised by serious budgetary constraints for the 4 Departments, namely Journalism and Media Studies, Library and Information Studies, Publishing Studies and Records and Archives Management. In spite of the above challenge which impacted negatively on the operations of the Faculty and its departments, there were notable achievements which this report highlights below for the year under review. Some of the notable achievements were the accreditation of three-degree programmes by ZIMCHE, namely Msc Strategic Communication, Bsc Hons in Publishing Media and Technology Studies, and Bsc Information Management.

Staff

The Department of Journalism and Media Studies has an establishment of 25 with 21 in post and four vacancies. There are four PhD holders and six staff members are in various stages of their PhD studies. On the other hand, the Department of Library and Information Science has an establishment of 13 lecturers, 1 Professional Instructor, 2 Teaching Assistants, 2 Research fellows,1 Technician and 1Senior Secretary. Miss Gratitude Chiwara -Ndoro; Mr Tanaka Matavika; Mr Nkosilontando R. Sibanda and Mr Munyaradzi Magazeni joined the Department as Tutorial Assistants in September 2019. Dr Mugwisi joined the Department on a temporary fulltime basis October 2019. The Department of Publishing Studies has staff

establishment comprises 1 professor, 7 lecturers, 1 Professional Instructor, 2 Teaching Assistants, 2 Staff Development Fellows, I Technician and 1 Secretary.

The Department of Records and Archives Management maintained 16 staff members from the previous year. These comprise of 9 Lecturers, 1 Research Fellow, a Secretary and Technician, including 4 Tutorial Assistants whose contracts run on a semester basis. Members pursuing studies at different levels continued to make steady progress during the year. These are Mr Mehluli Masuku, Ms Heather Ndlovu, Mrs Norah Makoni and Research Fellow Mrs Anele Chirume, who are all PhD candidates with the University of South Africa (UNISA). Mr Rodrick David also continued with his studies at Victoria University in New Zealand.

Registered Students per Programme:

The Department of Journalism and Media Studies had a total of 398 undergraduate students, and 48 postgraduate students. The Department managed to source nine (9) graduation prizes. These are the Zimpapers Floating Trophy for Best Graduating Student; Zimbabwe Media Commission Prizes for Best Graduating Student, 2nd Best Graduating Student and 3rd Best Graduating Student.

The Department of Journalism and Media Studies had a total of 398 undergraduate students, and 48 postgraduate students. The Department managed to source nine (9) graduation prizes.

dent; Alpha Media Holdings Floating Trophy for Best Graduating News Writer; Mighty Movies Pvt Limited Floating Trophy for Best Graduating Broadcaster; Skies Metro FM Floating Trophy for Best Graduating Radio Broadcaster; IMC World Ltd Floating Trophy for the Best Graduating Economic Reporter; JMS Department Floating Trophy for the Most Improved Student and the Voluntary Media Council of Zimbabwe Floating Trophy for the Best Graduating MSc Student.

The Bachelor of Science Honours Degree in Library and Information Science had a total of 93 Wence had a total of 146 students. Table 1. summarises the student population for the Department of Publishing Studies.

Table 1: Undergraduate Student Population; Department of Publishing Studies

Department		Part 1			Part 2			Part 3					Total				
	(P	(]	P	(C	I		(7	I	P	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
Publishing Studies	17	5	-	-	1	6	-	-	10	3	-	-	7	4	-	-	53

Note: C = conventional programme; P = parallel programme; F = female; M = male

On the other hand, the Department of Records and Archives Management had the following students as summarised by Table 2 and 3 below:

Table 2: Undergraduate Student Population; Department of Records and ArchivesManagement

DEGREE TITLE	YEAR	ENR	OLLED	TOTAL	REGI	STERED	TOTAL
		M	F		M	F	
BSc. (Hons.) RECORDS AND ARCHIVES MANAGEMENT	FIRST YEAR STUDENTS ENROLLED (Conventional Class)	6	15	21	6	15	21
(Conventional Classes)	FIRST YEAR STUDENTS ENROLLED	3	9	12	3	9	12
	(Block Class)						
	SECOND YEAR STUDENTS	12	22	34	12	22	34
	THIRD YEAR STUDENTS (ON ATTACHMENT)	3	13	16	3	13	16
	FOURTH YEAR STUDENTS	6	23	29	6	23	29

Table 3: Postgraduate Student Population; Department of Records and Archives Management

DEGREE TITLE	YEAR	ENR	OLLED	TOTAL	REGIS	STERED	TOTAL
		M	F		M	F	
MSc IN RECORDS AND ARCHIVES MANAGEMENT	PART I SECOND SEMESTER	4	9	13	4	9	13
MSc IN RECORDS AND ARCHIVES PART II SECOND SEMESTER MANAGEMENT		5	10	15	5	10	15

Graduation

A total of 77 students out of 94 (82%) graduated with BSc in Journalism and Me-

dia Studies. 14 students (100%) graduated with MSc in Journalism and Media Studies and 2 with. For the Bachelor of Science Honours Degree in Library and Information Science; Thirty-five (35) students sat the final year examinations. Eight (8) had First division, 30 had Upper Second Division, 7 had Lower Second Division and 3 had Passes. Two attained graduation prizes. For the MSc Degree in Library and Information Science, nineteen (19) students sat the final year examinations; there were 7 Merits, 10 Credits and 3 Passes. One attained a graduation prize. Table 4 below summarises the graduation statistics for the Department of Publishing Studies.

Table 4: Graduating Undergraduate Students Department of Publishing studies

First	class	Upper Seco	ond Class	Lower Second Class		Pass		iss Fai		Pass Fail		Total
F	M	F	M	F	M	F	M	F	M			
0	0	3	3	4	1	0	0	1	0	12		

In the Department of Records and Archives Management Sixteen (16) undergraduate students graduated, comprising of 14 females and 2 males. Thirteen (13) masters' students graduated, comprising of six (6) females and

seven (7) males

Teaching and Learning

The Department of Library and Information Science was in the process of reviewing the BSC curriculum; the Information Literacy Skills course was drafted and presented at Academic Board. It is yet to be reviewed by Senate. The

Department proposed a new Masters programme which is being reviewed by Academic Board.

Staff in the Department of Publishing Studies have embraced e-learning through the use of Google classroom and SAKAI. All third-year students managed to find Industrial Attachment placement. A field visit to Directory Publishers, Bulawayo and Mambo Press in Gweru for First Years could not be done due to lack of funds. The Department conducted Peer reviews and Student Lecturer reviews were also done online. The Department will continue to incorporate comments from the External Examiner on Course Outlines, Examination Question papers, marked examination scripts, Projects and Industrial Attachment Reports.

The Department of Records and Archives Management had a successful teaching and learning year for its students. The Department saw the approval of a new BSc Degree in Information Management and Technology by ZIMCHE. The new Programme will be rolled out in the 2020/2021 Academic Year on a conventional basis whilst the BSc in Records and Archives Management which has been in existence since 2004 will now be on offer on a Block Release Basis.

The Department is still considering plans to focus more on practicums than mere Field Visits to Harare, particularly at the National Archives of Zimbabwe and any other organisations to be approached. The new focus was reached because of the need to graduate students with hands-on skills and competencies that are expected of them in the industry.

Research Activities

The following publications highlight the research activities of faculty for the year under review:

Papers Published Department of Journalism and Media Studies

Mpofu, S. (2019). Emergent online discourses and the (re) framing of women's identity: A feminist critical analysis of selected Zimbabwean blogs. Communicare: Journal for Communication Sciences, 38(2), pp.1-16.

Ndlovu, M. (2019). New media and Ndebele hiraeth: Memory, Nostalgia and Ndebele Nationalism. African Journalism Studies. 39 (4): 109-130.

Ndlovu, M., Tshuma, L.A. and Ngwenya, S.W. (2019). Between Tradition and Modernity: Discourses on the coronation of the Ndebele 'King' in Zimbabwe. Critical Arts: South-North Cultural and Media Studies https://doi.org/10.1080/025 60046.2019.1691247

Tshuma, L.A. and Ndlovu, M. (2019). Remembering the past against the grain: an analysis of the reconstructions of the past in The Sunday News' 'Lest We Forget' column. Nations and Nationalism. 25 (3): 954-973.

Tshuma, L.A. (2019). Political billboards, promise, and persuasion: An analysis of ZANU-PF's 2018 harmonised elections political campaign. Journal of Marketing Communications.

Book Chapters published

Dube V. and Ncube, B.J. (2019). Majaivana and Protest Music in Zimbabwe: A Challenge to Political Hegemony and Marginalization in Music and Messaging in the African Political Arena, (Onyebadi, U. ed), IGI Global, Hershey, PA.

Ncube, B.J. (2019). Newspaper, Print (The SAGE International Encyclopedia of Mass Media and Society. (Merskin, D.L., ed), Sage Publications, Newbury Park, California.

Ncube, B.J. (2019). Magazine Journalism (The SAGE International Encyclopedia of Mass Media and Society. (Merskin, D.L., ed), Sage Publications, Newbury Park, California.

Articles published in newspapers/magazines

Mpofu, S. (2019). Zimbabwe media work space still a male domain. Zimfact Online, September 16 https://zimfact.org/analysis-Zimbabwe

Nkomo, T. (2019). Crisis Communication lessons from 'Black Saturday'. The Standard, January 20. https://www.the-standard.co.zw/2019/01/20/crisis-communicationlessons -black-saturday/Zimbabwe

Nkomo, T. (2019). Disruptive PR key to repositioning Zim brands, The Standard, June 16 https://www.thestandard.co.zw/2019/06/16/disruptive-pr-key-to-repositioning-zim-brands/Zimbabwe

Department of Library and Information Science:

There were 6 papers published in journals and 2 Book chapters published.

The Department of Publishing Studies published the following as illustrated by Table 5 below:

Table 5: Journal Publications by the Department of Publishing Studies

Presenter(s)	Journal	Title
Dr. M.M. Tapfuma and Ruth Hoskins	South African Journal of Information Management, 21(1): 1-9.	Usage of institutional repositories in Zimbabwe's public universities.
Dr. M.M. Tapfuma and Ruth Hoskins	Journal of Academic Librarianship, Vol. 45: 406-412.	Open science disrupting the status quo in academic libraries: A perspective of Zimbabwe.

Department of Records and Archives Management

Seven (7) papers were published by some members of the Department, whilst Six (6) book chapters were published by members of the Department.

Papers presented and Conferences attended

Mpofu, S. (2019). Gendered labour in precarious economies and its impact on women's lives: A critical political economy analyses of narratives from Zimbabwean women. Consuming Genders Symposium, 29-30 October, Witwatersrand University, Johannesburg, South Africa.

Ndlovu, N. (2019). The discursive construction of Zimbabwean women online African Feminisms (Afems) 5-7 September 2019 Johannesburg, South Africa.

Tshuma, L.A. (2019). Wrestling with the past, for the present and the future: An assessment of Mafela Trust's use of photographs in constructing collective memories in Zimbabwe Mnemonic Summer School conference, 18-20 September, Utrecht University, Utrecht, Netherlands.

Tshuma, L.A. (2019). From "one generation to the next": The media and the reconstructions of Gukurahundi post-memories by university students in Bulawayo, Zimbabwe. Memory in Africa: Transcultural Dimensions Inaugural Conference of the Africa Chapter of the Memory Studies Association, 17 - 19 October, University of Pretoria, Pretoria, South Africa.

Table 6 below summarises the papers presented by the Department of Publishing Studies.

Table 6: Conference Papers, Department of Publishing Studies

Presenter(s)	Conference	Funded by	Title
Dr. M.M. Tapfuma and Ruth Hoskins	22nd International Symposium on Electronic Theses and Dissertations, 6-8 November 2019, Portugal		Enhancing visibility of students' scholarship in Zimbabwe public universities
Dr. M.M. Tapfuma and Ruth Hoskins	Agents of Change: Print Culture and Publishing in Southern Africa work- shop, 22 – 24 May 2019, University of Pretoria, South Africa.	and Oxford Brookes, UK	

Collaborations with other universities/institutions

The Department of Journalism and Media Studies, together with the Zimbabwe Centre for Media and Information Literacy (ZCMIL) hosted the international Zimbabwe New Media Summit in August 2019 under the theme "New Media and Democracy: Beyond fake news, misinformation and disinformation". During the Summit there were parallel training sessions, which were attended by 40 participants including NUST students, journalists, citizen journalists, community reporters and civil society activists. Topics covered included Fighting Fake News: Digital Tools for Fact Checking; Social Media Dos and Don'ts for Civic Engagement; Data Journalism and Visualisation; and Best Practices for Ethical Content Generation and Reporting.

Community Service

Two staff members, Mr Thabani Mpofu and Mr Thandolwenkosi Nkomo together with Ambassador Mabed Ngulani from the Graduate School conducted training for 401 Bulawayo City Council employees on Customer Service and Customer Care. The Department co-hosted an international summit on "New Media and Democracy: Beyond Fake News, misinformation and disinformation" together with the Zimbabwe Centre for Media and Information Literacy (ZCMIL).

The Department of Library and Information Science, offered Mendeley training to the Faculty of Communication and Information Science students. The students who participated include Msc Library and Information Science and Bsc in Library and Information Science. Mr Mackina conducted a training workshop on digitisation of instructional materials in teacher education for UNESCO. The Department in conjunction with the United States Embassy conducted a guest lecture on the Changing roles of Libraries.

Mrs. Chiware attended the ZIBF as a representative of the Department in the proceedings. Dr. Dlodlo was a consultant

for Zambia Education Enhancement Project and Dr M.M. Tapfuma chaired the African Storybook Zimbabwean Chapter. Mrs Chiware represented the Faculty at the ZITF and with effect from January 2020 she is the Chairperson of the Publications Committee.

The Department of Records and Archives Management successfully hosted a breakfast meeting at the Cresta Jameson Hotel in Harare. The aim of the breakfast meeting was to make sure that the importance of records management is appreciated and supported by Management in the Public Sector as well as Captains of Industry in order to drive the vision 2030. The breakfast meeting also aimed at paving way for intensified professionalisation of Records Management in the Public Sector.

Income Generating Projects

The Department of Publishing Studies through the Creative Design and Editing Hub (CDTE HUB) continues to provide professional editorial and design services for books, thesis and dissertations to self-publishers, students, and other members of the community. The Department edited the NUST Yearbook and assisted various authors to self-publish books and thesis. The Department will offer short courses in Editing, Design and Printing, Digital Marketing and Copyright Essentials, Writing and Self-Publishing.

Strategic Planning

In line with the Faculty's thrust, the Departments contributed towards the National University of Science and Technology (NUST) Strategic Direction 4: Research, Teaching and Learning, and Community scholarly engagement. Three MOUs were entered into by two departments in the faculty namely Journlism and Media Studies and Records and Archives Management.

Challenges

The main challenges were Budgetary constraints in purchasing teaching resources, lack of funding to host an international conference, lack of proper laboratory facilities for practical courses in design and editing courses and the unavailability of Demonstrators/Professional Instructor who has current skills in Graphic Design. E-learning platforms continue to be partially used because of connectivity challenges in the University. This was attributed to limited availability of WI-FI due to limited bandwidth.

Plans for the Coming Year

The faculty is working on the Successful hosting of the 9th Annual ICCIS conference. Introduction of an IT related Masters programme, research data management consultancies and Data analytics workshop. We also intend to roll out the Master's Degree programme in Publishing Media and Technology Studies by the end of 2020.

Compiled by Dr Samuel Chabikwa

Dr. W Goriwondo

FACULTY OF ENGINEERING



High School students at the NUST Engineering EXPO

Introduction

The Faculty of Engineering was renamed from the Faculty of Industrial Technology and continues to run five Engineering disciplines namely; Chemical Engineering, Civil and Water Engineering, Electronic Engineering, Fibre and Polymer Materials Engineering as well as Industrial and Manufacturing Engineering. Following the development of the University's 2019 -2023's Strategic Plan, the Faculty of Engineering developed Faculty Operarional plans that were guided by Departmental Operational Plans. These were being driven by the University Vision and Mission. In order to harness compliance from all Faculty members, a Faculty Mission was developed and it

reads;

The year 2019 was an exciting and eventful year which saw achievements and growth of the Faculty of Engineer-

ing ,,

"To harness advanced science, technology and engineering capabilities in spearheading research and human capital development for industrialisation, modernisation and sustainable development. We shall utilise innovative teaching and learning in addition to breakthrough research in the field of engineering and technology. Maximum stakeholder engagement shall guide our operations to keep abreast and responsive to changes in the global marketplace".

The year 2019 was an exciting and eventful year which saw achievements and growth of the Faculty of Engineering. The Faculty won a sustainability grant from the Royal Academy of Engineering (RAE) to develop and prepare for the subsequent grant on Higher Education Part-nerships in Sub-Saharan Africa (HEP SSA).

2 Staff

The Staff freeze continued to inflict on high vacancy rates for all the Departments.

2.1 **Academic Staff**

There was a slight improvement in the staffing levels in the departments from the prior year. Fortunately, there were no resignations in the year, which would have worsened the situation. A comparison of 2018 and 2019 is presented in Table 1.

	In post (no.)	Vacancy Rate (%)				
Establishment	2018	2019	2018	2019		
10 (1 +9)	9	9	10	10		
12 (1+ 11)	7	7	42	42		
10 (1 + 9)	6	9	40	10		
11 (1+10)	8	9	27	18		
17 (2 + 15)	15	14	12	17		
		48		20		
	10 (1 +9) 12 (1+ 11) 10 (1 + 9) 11 (1+10)	Establishment 2018 10 (1+9) 9 12 (1+11) 7 10 (1+9) 6 11 (1+10) 8	Establishment 2018 2019 10 (1+9) 9 9 12 (1+11) 7 7 10 (1+9) 6 9 11 (1+10) 8 9 17 (2+15) 15 14	Establishment 2018 2019 2018 10 (1+9) 9 9 10 12 (1+11) 7 7 42 10 (1+9) 6 9 40 11 (1+10) 8 9 27 17 (2+15) 15 14 12		

Table 1: Academic Staff Lev-

The Faculty had an average vacancy rate of 20% and had a huge critical skill shortage in specialist areas in the Department of Civil and Water Engineering. It experienced the highest rate at 42%. The lowest

vacancy rate dropped to 10%, for Chemical Engineering and Electronic Engineering.

In order to improve the quality and number of staff in the Departments, the Staff Development Fellowship continued to realise increases in number of staff members enrolling for post graduate degrees such as PhD and MPhil.

The staff development drive within the Faculty continued to exhibit success as the number of academic staff members embarking on postgraduate studies continue to rise. The number of staff members in the Faculty pursuing their PhD studies increased from 15 in 2018 to 17 in 2019: Chemical Engineering (4), Civil and Water Engineering (3), Fibre and Polymer Materials Engineering (4) as well as the Industrial and Manufacturing Engineering (6)). The Faculty thus saw an increase in the number of PhD holders.

2.2 Non-academic Staff

The Faculty lost one Technician in the Department of Electronic Engineering due to resignation. Most of the positions in the non-academic staff category remained filled. Technician positions remained unfilled, due to the freeze on recruitment by the Government. The unavailability of technicians impacts negatively in the education of engineering.

3 Degree Programmes

3.1 Undergraduate Programmes

The Faculty undergraduate student population stood at 1883, an increase of 7% on 2018's figure of 1780 as shown in Table 2. Three departments in the Faculty continue to run parallel programmes.

Table 2: Undergraduate Student Population (2019)

Programme	MALE	FEMALE	TOTAL
CHEMICAL ENGINEERING	144	83	227
CHEMICAL ENGINEERING	156	82	238
(PARALLEL)			
		1	12.5
CIVIL AND WATER ENGINEER- ING	247	90	247
ING		+	
CIVIL AND WATER ENGINEER-	171	90	261
ING (PARALLEL)	1,1		
ELECTRONIC ENGINEERING	238	72	310
INDUSTRIAL & MANUFAC-	232	48	280
TURING ENGINEERING			
INDUSTRIAL & MANUFAC-	183	58	241
TURING ENGINEERING (PAR- ALLEL)			
FIBRE AND POLYMER MATE-	41	14	54
RIALS ENGINEERING)	41	14	34
OVERALL FACULTY TOTAL	1422	461	1883

The student population in the Faculty is depicted in Figure 2 as a proportion of male to female students over the past years – 2015-2019.

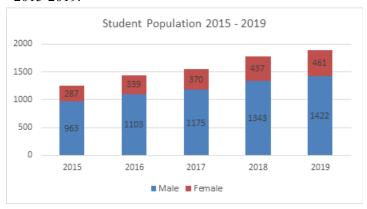


Figure 1: Undergraduate Student Population (2015 -2019) A total of two hundred and eleven (303) students graduated with a Bachelor of Engineering (B.Eng) and Bachelor of Tex-

tile Technology Honours degrees at the 25th Graduation Ceremony The distribution between gender is shown in Table 3.

Table 3: Graduating Students - 2019

	Bachelor	s Degree	Master of Eng	Total		
Gender	Male	Female	Male	Female	Male	Female
No. of Students	235	68	16	6	251	74

3.2 Postgraduates

The Faculty runs a Master of Engineering in Manufacturing Systems/Engineering and Operations Management. In the year 2019, the Department of Chemical Engineering enrolled its first intake for the Master of Engineering in Chemical and Environmental Engineering. The Faculty now has three Master of Engineering Programmes

3.3 Affiliates

The Faculty continues to offer affiliated programmes with the Bulawayo Polytechnic, Mutare Polytechnic, Kwekwe Polytechnic, TelOne and the Institute of Water and Sanitation Development.

4 Teaching and Learning

The Faculty participated in the harmonization of engineering programmes that was facilitated by the Zimbabwe Council for Higher Education (ZIMCHE). The programmes are awaiting finalization once the thought leaders have reviewed the proposed curricula. All changes will be implemented in the 2020 Academic year.

5 Research

Research continues in the Faculty, funded by external funders as well as, by the Research Board. Research output in the Faculty included journal paper publications and attendance to conferences.

5.1 Conferences

Some of the conferences the various Faculty members contributed papers to are as listed below:

5.2 Published peer reviewed journal papers

The publications in the Faculty continued to increase thereby signifying increased research activity. Faculty members had grants awarded by the Research Board.

6 Ongoing Projects

The major project that continued in 2019 was the one funded by the Royal Academy of Engineering. This project realised significant collaboration of the Faculty with partner institutions in Zimbabwe, Sub-Saharan Africa as well as the United Kingdom.

6.1 Royal Academy of Engineering Sustainability Grant

The Faculty won a sustainability grant for entrench and sustain the gains of the two year project on Higher Education Partnerships in Sub-Saharan Africa (HEP - SSA) that had ended in year 2018. The Faculty of Engineering held its Inaugural Engineering Expo and Open Day Event on the 28th of May 2019. The event was held under the theme "Harnessing partnerships and stakeholder engagement for sustainable engineering education at the National University of Science and Technology (NUST)". Highlights of the event included a workshop and exhibitions by all the five departments in the Faculty, namely Chemical Engineering, Civil and Water Engineering, Electronic Engineering, Fibre and Polymer Materials Engineering and Industrial and Manufacturing Engineering. The workshop was attended by approximately 130 people, drawn from various stakeholders of the Faculty of Engineering. Close to 30 % of the participants were from industry, alumni and other external stakeholders while 70 % represented internal stakeholders who included the academia and university management. All the workshop delegates toured the ongoing departmental exhibitions after the workshop. The exhibitions were open to members of the public and high school students who also received career guidance during the expo and open day. Two companies also partnered the Faculty during the exhibitions as they also took advantage of the expo to showcase their products.



Acting Dean Dr M Mpofu

FACULTY OF SCIENCE AND TECHNOLOGY EDUCATION



Teachers attending a workshop on Physical education

1.0 INTRODUCTION

he year 2019 has seen upsurge of growth in the newly established Faculty of Science and Technology Education in terms of enrolment and increase of programmes; especially at Masters Level. The success and tribulations are captured in the sub-headings below.

2.0 STAFFING

The Faculty has a compliment staff of ten (10) lecturers including the Dean instead of 36, among these five (5) have PhD and two (2) have enrolled for PhD. The shortage of academic staff has resulted in the Faculty engaging about 70 Part-time lecturers per semester which has resulted in the ballooning of Faculty budget. However, the Faculty has since advertised all vacant posts to solve the problem. Table 1 below shows staffing.

Table 1: Comparative Academic (Teaching) Staff growth, Occupancy and Vacancy Rate (2015 – 2018

Department	Post	Approve	d Establi	shment	Staff i	in post		Vacancy Rate %				
		2017	2018	2019	2017	2018	2019	2016	2017	2018	2019	
Faculty Office	Dean	1	1	1	1	1	1	0	0	0	0	
Art, Design and Technology Education	Professor	1	1	1	0	0	0	100	100	100	100	
	Lecturer	6	6	6	2	2	2	67	67	67	67	
	Research Fellow											
	Staff Devpt Fellow	1	1	1		0	0	100	100	100	100	
	Teaching Assistant	1	1	2	0	0	0	100	100	100	100	
Science, Mathematics and Technology education	Professor	1	1	1	0	0	0	100	100	100	100	
	Lecturer	11	11	11	5	5	5	55	55	55	55	
	Research Fellow											
	Staff Devpt Fellow	2	2	2	0	0	0	100	100	100	100	
	E-Learning Tutor	1	1	1	0	0	0	100	100	100	100	
	Teaching Assistant	4	4	4	0	0	0	100	100	100	100	
Technical and engineering Education and Training	Professor	1	1	1	0	0	0	100	100	100	100	
	Lecturer	7	7	7	2	2	2	71	71	71	71	
	Engineering Instructor	1	1	1	0	0	0	100	100	100	100	
	Research Fellow											
	Staff Devpt Fellow	2	2	2	0	0	0	100	100	100	100	
	Teaching Assistant	1	1	1	0	0	0	100	100	100	100	
	40	40	40	9	9	9	78	78	78	78		

3.0 STUDENTS

The enrolment of Faculty increased from 335 to 443 undergraduates and an Increase from 143 to 169 postgraduates students. Generally, students' behaviour is commendable as they exhibit pro-

from 335 to 443 undergraduates and an Increase from 143 to 169 postgraduates students.

The enrolment of

Faculty increased

fessionalism. However, they have to improve in adhering to deadlines in registering. The Faculty is on recruitment for PhD candidates as the current number is only three (3).

3.1 STUDENT ACADEMIC PERFOMANCE

There was a decrease from 91% to an overall pass rate of 73% for under graduating class, and for Postgraduate Diploma in Science and Technology Education decrease of 98% to 95%. Masters Group has graduated with pass rate of 96% from 98%. For detailed enrolment see Table 2A and 2B below:- There is a need for improvement and commitment among students.

Table 2A: Undergraduate enrolment 2019

Department			Part	I		Part	II		Part	III		Total		
	Programme	Subject Area	M	F	T	M	F	T	M	F	T	M	F	T
Art, Design and Techn Education	BDesEd (Hons)	Applied Art & Design	0	0	0	3	5	8	3	5	0	6	10	16
		Clothing, Text & F Design	0	0	0	0	5	5	0	6	6	0	12	12
		Design & Technology	6	9	15	0	0	0	0	0	0	6	9	15
Science, Mathematics and Technology Education	BScEd Hons	Accounting & Bus Studies	1	7	8	1	4	5	7	9	16	9	20	29
		Biology	6	9	15	5	6	11	1	6	7	12	21	33
		Chemistry	9	8	17	5	6	11	8	7	15	22	21	43
		Computer Science	14	26	40	9	16	25	11	18	29	34	60	83
		Mathematics & Statistics	28	22	50	7	13	20	13	17	30	45	53	98
		Physics	18	3	21	14	3	17	5	6	16	37	12	39
Technical and Engineering Education and Training	BTechEd (Hons)	Civil & Constr Eng	0	12	12	6	0	6	0	0	0	18	0	18
		Electr &Electronic Eng	5	0	5	8	0	8	4	1	5	16	1	17
		Mechanical &Ind Eng	5	1	6	0	0	0	0	0	0	5	1	6
		Technical Graphics	0	0	0	0	0	0	0	0	0	0	0	0
		Wood Scie &Techn	0	0	0	7	1	8	4	1	5	11	2	13
TOTALS			92	97	189	65	59	124	56	76	129	221	222	443
%			49	51		52	48		43	59		50	50	

Table 2B: Postgraduate Enrolment 2019

Department			Part I			Part II			Total		
	Programme	Subject Area	M	F	T	M	F	T	M	F	T
Art, Design & Technology Education											
	MTechEd (Hons)	Applied Art & Design	2	4	6	4	7	11	6	11	17
		Cloth Text & Fash Des	0	7	7	0	6	6	0	13	13
											<u> </u>
		Design & Technology	6	9	15	0	0	0	6	9	15
	Ma Plat			1.	1.5	12	-	10	-	10	125
Science, Mathematics and Technology Education	MScEd (Hons)	Accounting	4	11	15	3	7	10	7	18	25
		Biology	0	0	0	0	0	0	0	0	0
		Chemistry	0	0	0	3	3	6	3	3	6
		Computer Science	4	2	6	4	3	7	8	5	13
		Math and Statistics	7	5	12	4	2	6	11	7	18
		Math and Statistics	/	13	12	4	2	10	11		18
		Physics	5	1	6	0	0	0	5	1	6
				ļ							↓
	PGDSTE		7	3	10	0	0	0	0	0	0
											†
Technical and Engineering Education and Training	MTechEd (Hons)	Civil & Constr Eng	7	0	7	4	1	5	11	1	12
		Electr &Electronic Eng	0	0	0	0	0	0	0	0	0
		Mechanical &Ind Eng	0	0	0	5	2	7	5	2	7
		Wicchanical wind Eng	U	10	10	13	4	 	13	-	+'-
		Technical Graphics	0	0	0	0	0	0	0	0	0

		Wood Scie &Techn	0	0	0	6	1	7	6	1	7
	PGDHE		11	6	17	0	0	0	11	6	17
FACULTY	PhD		1	0	1	0	2	2	1	2	3
TOTALS			54	48	102	33	34	67	87	82	169
%			53	47		49	51		51	49	

4.0 TEACHING AND LEARNING

The Faculty of Science and Technology Education exhibits high standards of teaching and learning despite the challenges of space which inhibits lecturers to sometimes use modern technologies, although in some cases e-Learning, social media and collaborative methods are used by lecturers. The staff members have participated into the drawing of the Faculty's Strategic Plan for 2019. The MBKs for the Faculty were also drawn and sent with the rest of University.

5.0 RESEARCH

There has been an increased output on research and one Faculty member Dr George Shava received an award of being the most productive Postdoctoral Fellow in at North West University in South Africa. This is evidenced through the individual and collaboration publications with Faculty members. The Faculty has also published their research output with students.

5.1 PUBLICATIONS

- Nani, Gwendoline & Sibanda, Lwazi (2019). Choice of Practical Subjects: Is It Still a Gendered Phenomenon? A Case of Selected Co-educational Secondary Schools in Bulawayo Metropolitan Province, Zimbabwe. Journal of Educational and Social Research, 9 (3) 1-10.
- Mathwasa, Joyce and Sibanda, Lwazi (2019). The Effect of Examination-Related Anxiety on Career Pathway for High School Graduates. In S. G. Taukeni, (Ed.), Addressing Multicultural Needs in School Guidance and Counselling (pp. 216-237). Hershey: IGI Global.
- Shava, G.N., and Tlou, F.N. (2019) Challenges Facing Women in School Leadership Positions: Experiences from a District Zimbabwe.
- Shava, G.N., and Tlou, F.N. (2019) Distributed leadership in education, contemporary issues in educational leadership.
- Shava, G.N., and Tlou, F.N. (2019) Principal leadership and School Improvement: Experiences from South African School Contexts.

5.2 CONFERENCES PRESENTATIONS

Phuthi, Nduduzo (2019). Repositioning Higher education for conceptualising and alleviating mass poverty. Paper presented at the 12th Annual SANORD Conference, Gaborone, Botswana, 11-13 September 2019.

Sibanda, Lwazi (2019). Assessment for Learning in Higher Education: Experiences of one University in Zimbabwe. Paper presented at the 7th Annual Research Day at National University of Science and Technology in Bulawayo, 20-21 June, 2019.

Sibanda, Lwazi & Nani, Gwendoline, V. (2019). Feedback as an Assessment for Learning Tool in Higher Education: Perceptions of Lecturers and Postgraduate Students in one University in Zimbabwe. Paper presented at the 9th Annual Teacher Education and Interdisciplinary Research Conference (TEIR), UNISA, in Victoria Falls, Elephant Hills Hotel, Zimbabwe, 07-10 October, 2019.

Sibanda, Lwazi (2018) Assessment for Learning in Higher Education: Experiences of One University in Zimbabwe. Paper presented at SASE Conference, Lagoon Beach Hotel, Cape

Tlou, F.N., and Mpofu, M. (2019) Alignments and misalignments of education policies to reality and quality of mathematics for low socio economic status learners in Zimbabwe as they relate to sustainable development. 11th -15th September 2019 University of Botswana Conference Centre, Gaborone, Botswana.

5.3 PHD RESEARCH AND SUPERVISION

The second PhD graduate of the Faculty was capped at the 2019 Graduation Ceremony. One additional candidate was enrolled and that keeps the number of current candidates at three.

6.0 OUTREACH PROGRAMMES AND COMMUNITY PARTICIPATION

This area needs urgent support in terms of funding and other resources, as well as proposals by members of the Faculty on their interest in developing and spearheading community-centred projects and collaborations.

One staff member has participated in National University of Science and Technology Academic Women's Researchers (NUSTAWR) outreach programme and met senior management in the Ministry of Primary and Secondary Education in Matabeleland South Province. Some staff members are involved in a project for Sustainable Development with the students on an environmental project.

7.0 CHALLENGES

The Faculty continue to face challenges of under-staffing, shortage of space, teaching resources, and conducive learning environments persist. The Faculty has succeeded on developing and introducing new programmes. What remains is to seek and mobilise resources to include quality in the delivery of these programmes. The Faculty continues to engage the university to provide teaching materials and office space, equipment and computers.

8.0 PLANS FOR THE COMING YEAR

The thrust of the coming year will be the recruitment of additional staff to ease the burden on the existing full time members and also to implement use of modules on the MBKs in August 2020. Benefitting from the University's endeavours to source more teaching and office space, the Faculty will use the facility to acquire more equipment and resources to add quality to students' learning. The faculty is looking forward to using modules that is the credit system in August 2020.

Compiled by :Dr Mabhena Mpofu Acting Dean



Dean Dr R Gwini

FACULTY OF MEDICINE



Student trainee doctors attending to a patient at Mpilo Hospital

Introduction

he Faculty of Medicine is located at Mpilo Central Hospital Premises. It is comprised of the following departments:-

- Department of Anatomy and Physiology
- Department of Clinical Pharmacology and Biochemistry
 - Department of Psychiatry, Social and Behavioural Sciences
- Department of Community Medicine
- Department of Pathology
 - Department of Medicine
 - Department of Surgery
 - Department of Paediatrics
 - Department of Obstetrics and Gynaecology
 - Department of Midwifery and Nursing Sciences
 - Graduation (MBBS- BSc-. Nursing , MSc and Midwifery

The Faculty witnessed 19 MBBS, 17 BSc in Midwifery and 7 in MSc in Midwifery graduation in 2019 and most importantly to note that the BSc-Midwifery was the inaugural group to graduate in this programme.

The Faculty is collaborating with other health training institutions in Inter-Professional Education and Collaborative Practice (IPE/CP).

Registration of the faculty

Registration of the Faculty of Medicine with Educational Commission for Foreign Medical Graduates (ECFMG) and individual medical regulatory authorities such as General Medical Council UK (GMC) is still ongoing.

Faculty Programmes

MBBS

Pre-clinical stage of the MBBS programme progressed well despite the challenges of lack of reagents to conduct some of the practical sessions. The clinical stage (Year IV - VI) was disrupted by the incapacitation declared by the doctors in September last year, necessitating deferment of the final MBBS examinations and postponement of end of rotation continuous assessment for year IV and VI.

BSc Midwifery

Part I – 8 students sat for their examinations, 5 passed and three failed, Part II- 16 all passed, Part

III- 18 and all passed.

MSc Midwifery Education

The MSc Midwifery Teaching progressed well and 6 students passed their dissertation. This programme has been attracting few students locally due to the structure of the programme i.e. full time and most prospective candidates were failing to get clearance from their working stations. The faculty is in the process of changing the programme from a full time course to a block release programme.

MMed Family Medicine

Preparations for commencing this programme are currently being worked on. The Faculty managed to receive assistance from the Stellenbosch University, who seconded Professor Conradie to mentor the Department. Prof Conradie visited the Faculty from 24-26 April in 2019. The programme could not commence in August as had been envisaged due to logistical challenges.

MBBS Intake

CLASS	MALE	FEMALE	TOTAL
Intake 2014	15	7	22
Intake 2015	12	12	24
Intake 2016	11	13	24
Intake 2017	15	9	24
Intake 2018	14	10	24
Intake 2019	12	13	25
TOTAL	79	64	143

BSc and MSc in Midwifery Intake

Programme	Year	Male	Female	No of students
BSc Hon in Midwifery: Part 3	2018 -2019	2	15	17
BSc Hon in Midwifery Part 2	2018-2019	2	17	19
BSc Hon in Midwifery Part 1	2018-2019	11	4	15
MSc in Midwifery Education Intake 2017	2018 - 2019	0	7	7
MSc in Midwifery Education Intake 2018	2018 - 2019	1	5	6

Staffing

There is critically shortage of staff in all disciplines; the Faculty continues to engage the University to lobby for unfreezing of posts.

Faculty office

Post of the Deputy Dean remained vacant. Staff compliment increased to six with the addition of a Biostatician.

Academic Staff

Department	Establishment	№ of Lecturers in Post	№ of Lecturers required
Anatomy	6	3	3
Physiology	4	2	2
Pharmacology	5	3	2
Biochemistry	2	1	1
Pathology	9	6	3
Community Medicine	8	2	6
Surgery and Anaesthetics	18	8	10
Obstetrics and Gynaecology	6	4	2
Medicine	13	3	10
Paediatrics	9	3	6
Psychiatry	5	1	4
Nursing and Mid- wifery	8	4	4
Total			53

The number of Lecturer/student ratio remains undesirable. Several requests to have the number of Lecturers increased have been submitted to the University authorities. The Faculty is currently awaiting appointments of interviewed Lecturers to fill in the vacant posts. The Faculty is embarking on commencing new programmes and is hoping to have the number of Lecturers increased.

Research

The Faculty members continue to research in areas if malaria, HIV, diabetes and publishing interesting case reports, encountered during their clinical practice. Some lectures have contributed to some chapters in medical books. The faculty had a total of 12 publications for 2019. One of the lecturers won a Keystone Symposia Global Health Travel Award (Canada). The department of Paediatrics

is participating in CHAPAS IV clinical trial.

Collaboration

The Faculty is collaborating with other health training institutions in Inter-Professional Education and Collaborative Practice (IPE/CP).

Community engagement

Members of staff participated in the World Aids Day, Hypertension day and World Kidney day commemorations. Medical students managed to donate groceries to children's home.

Prepared by Dr R Gwini, Dean (Faculty of Medicine)



Dr. F. S. Nkomo

BURSAR

1. VISION

To be a client – friendly unit that makes optimum use of technology.

2. NATIONAL CONTEXT

The productive output of the Zimbabwe economy slowed down from 4.7 per cent in 2017 and 3.4 per cent in 2018, to -6.5 per cent in 2019. out of sync with an acceleration from 3.2 per cent to 3.3 in Sub- Saharan Africa, as indicated by the following table:

Table 1: Gross Domestic Product Growth

	2018	2019	2020 (Projection)
Sub-Saharan Africa	3.2	3.3	3.5
Zimbabwe	3.4	-6.5	3.0

Source: IMF: World Economic Outlook (January 2020 update)

3. IMPACT ON NUST

The fiscus delivered on Blue Book allocations for recurrent expenditure and Public Sector Investment Programme allocations. However, the decoupling of the RTGS dollar from the US Dollar on 22 February, as well as the re-introduction of the Zimbabwe dollar in June, saw annual inflation re-emerging, and ending the year at 421 per cent. Meanwhile the Zimbabwe dollar to US dollar exchange rate slid from the statutory 1:1 at 22 February to 1:17 at year end. With fees capped at their US Dollar nominal levels, operational deficits ensued.

GOVERNMENT GRANTS 2019

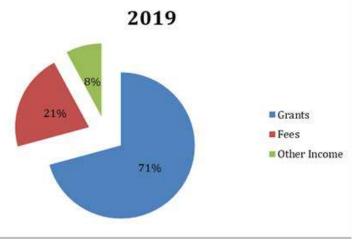
	EXPECTED	ACTUAL	VARIANCE	VARIANCE (%)
	ZW\$	ZW\$	ZW\$	
Salaries Grant	30 438 000	53 157 840	22 719 840	74.6%(favourable)
Other Grants	100 000	500 000	400 000	400% (favourable)
Public Sector Investment Programme (PSIP) –Inno- vation Hub	1 970 000	1 970 000	-	-
Public Sector Investment Programme	1700 000	1 700 000		

The Applied
Genetic Testing
Centre continued
to provide services to the nation,
though its revenue
generation was
constrained in the
short term by the
economic environment. The centre
made a significant
impact in the nation with its unique
basket of services.

4. SOURCES OF UNIVERSITY FUNDS

	2019		2018
Grants	\$55 627 840	70.7%	66.2 %
Fees	\$16 853 830	21.4%	25.6 %
Other Income	\$ 6 787 468	7.9%	8.2 %
	<u>\$79 280 132</u>	<u>100</u> %	<u>100%</u>

Source: UnAudited Financial Statements 2019



5. NOTEWORTHY PROJECTS

The **Applied Genetic Testing Centre** continued to provide services to the nation, though its revenue generation was constrained in the short term by the economic environment. The centre made a significant impact in the nation with its unique basket of services.

6. FINANCIAL PERFORMANCE

Revenues totalled \$78 642 846 compared to expenditure of \$100 466 311 resulting in a deficit of \$21 823 465. Included in the figure of expenditure are provisions cash in lieu of leave, passages and ac-

counts receivable totalling \$18 605 777, translating into operational expenditure of \$81 860 534 and an operational deficit of \$3 217 688.

A comparison of expenditure and income per student follows:

No of Students	10 500	9 500
	2019	2018
	ZS\$	US\$
Expenditure per student	\$7 796	5 229
Income per Student	\$7 489	4 735

7. OUTLOOK

The next twenty four months should see the re-commencement of infrastructural development at the NUST main campus, funded by a combination of PSIP and Joint Venture funding.

Difficulties to be overcome include access to and generation of foreign currency, price escalations and attendant budgetary constraints

BURSAR Dr. F. S. Nkomo

