## **Bindura University of Science Education**





## **Annual Report**

PROMOTING SCIENCE FOR HUMAN DEVELOPMENT

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## Vision

An internationally renowned university producing transformative and innovative graduates.

### Mission

To produce knowledgeable, skilled, innovative and entrepreneurial graduates through teaching and research innovation; and develop products and services for industrialisation and community transformation.

## Overall Functions of BUSE

In line with the Government of Zimbabwe's vision on Education 5.0, Bindura University of Science Education shall perform the following functions: -

- 1. Teaching (certificates, diplomas, undergraduate and postgraduate degrees); development of teaching and learning materials, conducting lectures, supervision of student research projects and industrial attachment, examinations, student support and advising
- 2. Research: conducting basic and applied research; mobilization of external resources, conducting post-graduate research; organizing and participating in seminars and conferences; publication of research outputs
- 3. Community engagement: conducting short courses, training and participation in community programmes, providing consultancy services
- 4. Innovation: development of goods and services (patents, copyrights, trademarks, etc)
- 5. Industrialisation: transferring technology and establishing spin-offs

## 1 CHAIRMAN'S STATEMENT

Bindura University of Science Education Council is proud to lead a vibrant and continuously growing university. The university has worked towards attaining fineness in the areas of research, learning and community engagement in Zimbabwe.

Despite the turbulent economic atmosphere the university embarked on multiple infrastructure development projects. A major milestone in infrastructure development was the construction of a 1.619 km tarred access road from the Bindura-Mt Darwin Highway to the new campus. The access road which was officially opened by the Chancellor, His Excellency, Cde ED Mnangagwa, will go a long way in improving accessibility of the new campus and safety for pedestrian staff and students.

A major area of concern to my Council is student accommodation. Students have a hard time to secure suitable and reasonably priced accommodation in the private homes where exploitation is rampant. We are determined to raise funds or seek partnerships to build at least one hostel before our term runs out.

We would like to extend our appreciation to the Government through our parent Ministry, the business sector, Bindura Community and sister universities who supported the University in the year. Despite the prevailing economic hardships the business of teaching and learning continued to thrive in the university.

On behalf of the Council and on my own behalf, I would like to appreciate the Bindura University of Science Education, Vice Chancellor Professor Eddie Mwenje, the entire management team and staff for working tirelessly together to fulfil the mandate of the institution.

We look forward to a prosperous 2020.

I thank you

## 2 VICE CHANCELLOR'S STATEMENT

In chatting its strategic direction, the university in 2019 deployed itself to the development and crafting of the new strategic plan which will run from 2019 to 2023. The strategic plan spells out the clear vision of the university synchronising it with national vision 2030 guided by the Ministry of Higher and Tertiary Education Innovation, Science and Technology development strategic plan and Education 5.0.

The university has become a high value corporate world sponsor through the continuous churning out graduates that feed into the national human capital needs. In the year 2019 a total of 1920 were awarded with degrees and various academic accolades. This is a 10% increase from the 2018 figure of 1719. Of the 1920 graduates 48% of the total graduates were female and this is to be applauded given that science related fields have had few female students in the past.

Several programmes that meet the national developmental requisite have been introduced by the university, these include Master in Sports Science. Master in Climate Change and sustainable development and Master of Science in Disaster and Risk Management. The programmes address the critical skills gap and are in tandem with the evolving global phenomena and trends.

Bindura University of Science Education continued to work on research and development initiatives. The University's research and innovation thrust covers the areas of tourism, environment, agriculture, climate change mitigation and human and animal health. The prototype testing of broiler chicken feed based on the Moringa Oleifera is one of the research activities being undertaken by the university. This project was funded by the Finish -Southern African Partnership programme. In line with this the university has assisted in the establishment of the National Moringa Farmers Association.

The university also led in a national project on the revision of Zimbabwe's Agro ecological Zones. The project was carried out in partnership with other local universities was led by The Dean in the Faculty of Science and Engineering, Professor Desmond Manatsa.

The University encouraged students to engage in extra curricula activities that help in the development of a whole person. Bindura University students are the proud winners of the 2019 Building Opportunities on Student Talent (BOOST ENACTUS). It is unfortunate that the students were denied Travel Visas to enable them to make a maiden appearance and represent Zimbabwe at the BOOST ENACTUS World Competitions in the Unites States of America.

I thank you

## **3 REGISTRY DEPARTMENT**

#### 3.1 Introduction

The purpose of the report is to provide information on the main activities of the Registry Department during 2019.

#### 3.2 Academic Registry

#### 3.2.1 Achievements

The Academic Registry Section managed to run both examination sessions smoothly in 2019 despite the financial challenges.

- There was an 8% increase in graduates
- In the two semesters, the University experienced increases in enrolment into the programmes on offer as compared to the previous year.

#### 3.2.2 Admission Statistics

	201	8 REG	GISTE	RED	2019	REGI	STERED	ĒD			
	FEMALE	MALE	TOTAL	ACCEPT ED	FEMALE	MALE	TOTAL	ACCEPTED	% UPTAKE	ANALYS	%
FScEd	43	7	50	175	72	11	83	130	33.33%		39.7 5%
FC	121	139	260	426	126	137	342	342	78.9		23.9 7%
FAES	20	19	39	44	28	42	70	91	74.7		44.2 8%
FSc	31	49	80	174	51	95	152	218	66%		47%
FSSH	17	11	28	28	3	12	15	38	39%		
TOTAL	232	225	457	847	280	297	662	819	81%-		31%

#### 3.2.3 February -June Semester

Table 1: February -June 2019 Semester

#### 1.2.2.1 August -December Semester

	AUG-I	AUG-DEC 2019 INTAKE		AUG-DEC 2018 INTAKE				
FACULTY	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	%	Analysis
Science Education	65	130	195	58	142	200	4.50%	_
Science & Engineering	173	149	322	159	110	269	12.26%	
Agriculture &Environmental science	125	87	212	125	111	236	11.01%	
Commerce	243	237	480	200	211	411	12.89%-	
Social Sciences and Humanities	44	157	201	50	210	260	24.61%	
TOTAL	650	760	1410	592	784	1376	2.47%	

Table 2: August - December2019 Semester

The University recorded 2.47% increase in enrolment compared to Aug-Dec 2018.

The University total student population for the February - June semester was 5718 and that for the August - December was 6171.

The tables below show the distribution of the students by gender and faculty.

#### 3.2.4 February-June 2019 Students Distribution by Gender

FACULTY	MALE	FEMALE	TOTAL
Science Education	344	629	973
Science And Engineering	593	416	1009
Agriculture And Environmental Science	452	322	774
Social Science And Humanities	281	675	956
Commerce	1055	951	2006
Grand Total	2725	2993	5718

Table 3: Student Distribution by Gender- Feb-Jun 2109

#### 3.2.5 August- December 2019 Students Distribution by Gender

FACULTY	MALE	FEMALE	TOTAL

Science Education	289	657	946
Science And Engineering	736	559	1295
Agriculture And Environmental Science	456	356	812
Social Science And Humanities	242	691	933
Commerce	1137	1048	2185
Grand Total	2860	3311	6171

Table 4: Students Distribution by Gender - Aug-Dec 2019

#### 3.3 Graduation

The University held its 18<sup>th</sup> Graduation ceremony on 12 October 2019. The University witnessed an increase of 8% in the number of graduates from the previous year.

CATEGORY	MALE	FEMALE	TOTAL
Master	164	83	247
Postgraduate Diploma	33	12	45
Undergraduate	592	522	1114
Diploma	204	309	513
Total	993	926	1919

#### 3.3.1 Summary of Graduation Statistics

Table 5: Summary of Graduation Statistics

CRITICAL SKILLS AREA	LEVEL	MALE	FEMALE	TOTAL
Engineering and	Undergraduate	21	6	27
Technology	Masters	0	0	0
	PhD	0	0	0
Natural and	Undergraduate	241	175	416
Applied Sciences	Masters	78	37	115
	PhD	0	0	0
Medicine	Undergraduate	0	0	0
	Masters	0	0	0
	PhD	0	0	0

#### 3.3.2 Reduction of the National Skills Gap

Health Sciences	Undergraduate	3	7	10
	Masters	0	0	0
	PhD	0	0	0
Agriculture	Undergraduate	19	11	30
	Masters	2	0	2
	PhD	0	0	0
Law	Undergraduate	0	0	0
	Masters	0	0	0
	PhD	0	0	0
GRAND TOTAL		364	236	600

Table 6: Reduction of the National Skills Gap

#### 3.4 Human Resources Annual Report

#### 3.4.1 Activities

The year was characterized by low recruitment of staff which saw the appointments of the Dean, Faculty of Science and Engineering on 1 April 2019 and Dean Faculty of Science Education on 1 June 2019. The Librarian's contract was renewed for a year from 1 September 2019 to 31 August 2020. The University recruited two (2) Professors and eight (8) PhD holders. Eight (8) PhD holders completed their studies in 2019.

#### 3.4.2 Achievements

- The 6th Wellness Day commemoration was successfully held on 6 July 2019.
- Eight (8) Academics graduated with PhDs through the University Staff Development Programme.

#### 3.4.3 Summary of Academic Promotions Done in 2019

Eleven (11) promotions were done in 2019. A summary of the promotions made is as follows:

SUMMARY OF ACADEMIC PROM 2019	OTIONS DONE IN
Promotion Category	Number of Academics
Promotion from Associate to Full Professor	1
Promotion from Senior Lecturer to Associate Professor	5
Promotion from Lecturer to Associate Professor	2

Promotion from Lecturer	Lecturer	to	Senior	3
Total				11

#### Table 7: Summary of Academic Promotions

#### 3.4.4 Training Activities

The following training activities were offered to staff members as an ongoing exercise to equip members with knowledge and skills:

Training	Target Group	Description	NUMBER
Grant Proposal Writing Module	All Academic Staff	Members were appraised on the expectations of institutions that offer grants. Practical sessions were conducted on proposal writing	12
Supervision of proposals/ dissertations	Faculty of Commerce; academic staff	Capacitating staff on supervising dissertations	40
E learning Training	All Academics	Use of Moodle and enhancing E-learning	70
ICT Refresher course for Administrative staff	All Administrative staff	Recap on ICT skills (excel Google)	120
2019-2023 Strategic Plan	Administrators	Presentation and familiarization: Integrated Results Based Strategic Plan	50

Table 8: Training Activities

#### 3.4.5 Challenges

- Increasing staff turnover at 5.9% (2019) as compared to 3.2% (2018)
- Leave obligation liability remained high due to critical staffing levels.

#### 3.4.6 Leave Obligation As At 31 January 2019 and November 2019

Staff	January 2019 (\$)	December	Difference	% Change
Category		2019(\$)		

Executive Staff	175 770.43	453 013.02	277 242.59(-)	158% (unfavorable )
Academic Staff	1 204 646.76	3 692 603.07	2 487 956.31 (- )	206% (unfavorable )
Administrativ e And Support Staff	727 370.60	1 682 502- 44	955 131.84 (-)	131% (unfavorable )
Total	2 107 787.79	5 828 118.53	3720330 (-)	176% (unfavorable )

Table 9: Leave Obligations

- Outstanding contact and sabbatical leave due to funding challenges.
- There was critical staff accommodation shortage for PhD holders.

#### 3.5 Conclusion

The year was punctuated by high staff turnover suggesting a decline in staff morale and push factors.

# 4 INFORMATION, PUBLIC RELATIONS AND PROTOCOL DEPARTMENT.

#### 4.1 Preamble

The report chronicles the activities that were undertaken by the Information, Public Relations and Protocol Department in 2019. These activities created and helped to maintain good relations with the media, improve institutional visibility, create rapport with different stakeholders, and generate positive perceptions about the University. They include placement of advertisements, pitching up of billboards, use of the social media, compilation of publications, creation of partnerships with different organisations and international relations activities.

#### 4.2 Publications

#### i) University Newsletter

The Department ensured that various University stakeholders were kept abreast with issues happening at BUSE through wide distribution of the University newsletter, The Meeting Point. Apart from the monthly newsletter, the department also posted current news as they happened on the website and social media platforms such as Facebook and Twitter.

#### ii) Annual Report

The 2018 Annual Report for 2018 was compiled and uploaded on the website.

#### 4.3 International Relations

The department was actively engaged in International Relations issues. It made plans to commence the enrolment of international students starting in 2020.

#### 4.4 University Affiliations

The University is still a member of the following national and international organisations:

- Zimbabwe Universities Vice Chancellors' Association
- Southern African Region Universities Association (SARUA)
- Association of African Universities (AAU)
- Association of Commonwealth Universities (ACU)
- International Association of Universities (IAU)

Payment of subscriptions to some of the above international organisations were not up to date because of foreign currency shortages.

#### 4.5 Partnerships

The University entered into partnership with the following organisations:

Organisation

Areas of Cooperation

Ministry of Youth, Sport, Arts and Recreation (December 2019) Agridig Trade & Research Centre (November 2019)	To facilitate the development of infrastructure for a High Performance Sports Centre Promote research in high performance sport development The implementation of a Smart Connect platform by AGRIDIG in conjunction with BUSE The use of the platform to facilitate online buying and selling of agricultural produces The marketing activities associated with linking up buyers, farmers and transport operators
AT Academy (September 2019)	Development of joint researches Institutional visits Participation in seminar and academic meetings Exchange of academic materials and academic publications
Y & M Learning Institute (October 2019)	<ul> <li>Facilitate the running of courses in Namibia by BUSE</li> <li>Facilitate the hosting of awareness campaign of BUSE programmes</li> <li>Identify opportunities for Industrial attachment in Namibia for BUSE students</li> <li>Recruit Namibian and Angolan students for BUSE programmes</li> <li>Establish a partnership for BUSE operations in Namibia</li> </ul>
Venture Science Academy	To assist student entrepreneurs test and validate business ideas for new venture creation To launch online entrepreneurship programmes
PSMI	PSMI to provide a comprehensive training and internship programme for eligible students studying towards a BSc in Optometry

Table 10: Partnerships

#### 4.6 Corporate Social Responsibility Programmes

#### 4.6.1 Donations towards the Cyclone Idai Disaster

The University donated tones of goods towards the Cyclone Idai disaster. The donations were presented in April 2019 by a group of students and staff from the Disaster Management studies degree programme.

#### 4.6.2 Book Donations for Gwangwava High School

The University donated books worthy USD10, 000.00 to Gwangwava High school in Rushinga in September 2019. The books were meant for the school library which the school was planning to open in 2020.

#### 4.7 Website

The University launched a new website in August 2019. The University website was optimised for search engines and is now easily appearing in search engines like google, yahoo etc.

#### 4.8 Conclusion

The department made frantic efforts to put the university in the limelight through the activities it undertook. However, budgetary constraints affected the department from achieving some of its set goals including pitching up billboards and printing of some university publications.

## 5 LIBRARY

#### 5.1 Introduction

The Bindura University of Science Education Library in 2019 focused on enhancing access to information resources through the virtualization of library services. In order for this endeavour to be successful, a number of areas had to be addressed. Consistent uploading of content into the e-library and twenty-four-hour access to information resources and services on campus as well as off-campus were critical success factors. Training sessions in both the physical and virtual space were provided. Self-learning guides were prepared and made available in the virtual space while group training sessions were afforded in the physical space. The important aspect of marketing the products and services available was done through various social media and online platforms while quality assurance measures were put in place to enhance user experience.

#### 5.2 Activities

#### 5.2.1 Library Registration:

During 2019, a mere 2444 library users of a population of close to 6 000 registered to use the Library. This was a 52.3% decrease from 2018 figure of 5 126. The continuous decline in the registration of library users is symptomatic of underlying challenges. Library registration is recorded when a student activates his/her loan account, it does not include those who visit the library but have not activated their loan accounts.

One thousand two hundred and thirty-seven (1,237) users were registered for remote access to e-resources.

External users registered in 2019 were one hundred and thirty-five, most of whom were students on vacation from other universities.

User category	Number of registered users
Undergraduate conventional	2 218
Undergraduate block release	131
Postgraduate students	60
Academic and administrative staff	19
Junior staff	16
Remote access	1 237

**External users** 

135

Table 11: Library Users

#### 5.2.2 Information resources usage

Item Group	2019	2018	2017	2016	2015
Open Shelves (print)	14,110	14,730	18011	23 203	36843
Reserve (print)	82	76	184	87	644
Electronic downloads	59,954	54,886	62,132	70,089	108,024
Website visits	20,147	23,245	25,453	25,958	

#### Table 12: Information Resource Usage

#### 5.2.3 Marketing

Various social media platforms were used to market library resources and services as well as interact with the user community.

PLATFORM	LIKES	Followers
Facebook	2 852	2857
Twitter	245 tweets	322
YouTube	1161	17

Table 13: Social Media Analytics

#### 5.3 Research Support Services

Research support services were on offer throughout the year in all faculties and available to all levels of students and teaching staff.

These services were provided in various formats depending on the audience. Research clinics were held for final year undergraduate students working on their dissertations as well as doctoral and master's students. Information literacy lectures were given to undergraduate students doing the Communication Skills course whereas e-resources training was held for the generality of students either in subject groupings or individually.

#### 5.4 Collection Development

#### 5.4.1 Book purchases/donations/collection development

• A total of 18 books worth ZWL7 098 were purchased during 2019 whereas 602 books were bought in 2018. This state of affairs was as a result of severe financial

constraints. As a result, the Library promoted the use of electronic books from several databases in its collection.

- Donated books totalled 265 volumes with 95% of these coming from Book Aid International, a long standing partner of the Library.
- In addition, a number of open resources were added and made accessible through library webpages.
- Cornell University donated the Electronic Agricultural Library (TEEAL), on external hard drive containing journal articles for the period 1993 to 2017.

#### 5.4.2 Institutional Repository

The BUSE Institutional Repository registered modest growth with items standing at 2,214 and distributed as follows:

1. Faculty of Agriculture and Environmental Science- 1702. Faculty of Commerce- 6293. Faculty of Science and Engineering- 4824. Faculty of Science Education- 5025. Faculty of Social Sciences and Humanities- 4216. Library- 10

#### 5.5 Electronic Library

The e-library, a collection of examination papers and undergraduate dissertations is only available on the BUSE intranet. The collection contains approximately 8,000 items.

#### 5.6 Training and awareness sessions

Training sessions were targeted at various categories of students as well as lecturers to empower them to effectively utilise information resources and library services in their teaching and learning activities.

Internationally recognised days to bring awareness to new phenomena in research, like Open Science and Open Data were celebrated with the help of mini grants from organizations supporting scholarly communication.

#### 5.7 Stock take

The Library conducted a stock take exercise at the beginning of 2019. Missing stock numbered 12 items, a decrease from 20 recorded in the previous year.

#### 5.8 Library Strategic Plan

The Library crafted its strategic plan for 2019-2024.

#### 5.9 Achievements

• Liaison between faculty members and their respective librarians improved tremendously. Inroads have been made with regard to the delivery of the

Information Literacy module through the Communication Skills Department as a result of increased collaboration between faculty and library staff and realization that librarians have a role to play in the scholarly development of the 21<sup>st</sup> century student. Increased training sessions for both teaching staff and students were registered as a result of the interactions.

- Professional capacity building improved among members of Team Library as two members acquired Master's degrees while one member attained her Phd. Continuous professional development in the form of webinars and online courses enhanced members' work output.
- The Library was awarded a grant of £9,000 by the Beit Trust to procure computer desks and chairs to furnish training space within the Library.
- A local payment solution for software which enables off campus access to library resources was reached.

#### 5.9.1 Extension Services

The Library's community engagement activity during 2019 was limited to donating books to schools within its environs. Six hundred and sixty-six books which were surplus to the Library's requirements were donated to five secondary schools and the Bindura Hospital Nursing School.

#### 5.9.2 Publications

Two members of the library team between them published four book chapters and four journal articles.

#### 5.10 Conclusion

In conclusion, the Library focused on maintaining and in some cases strengthening the developments made in previous years. Real virtualisation of library services will only become a reality when the requisite resources are made available.

# 6 FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCES

#### 6.1 Introduction

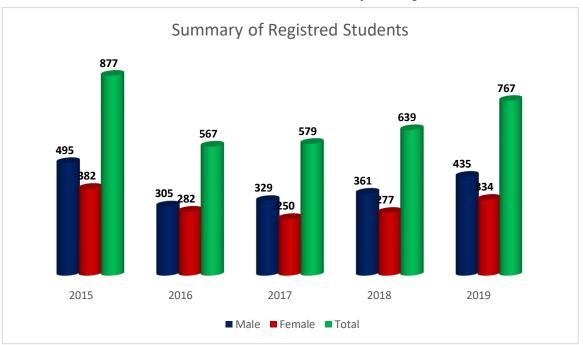
The Faculty of Agriculture and Environmental Sciences (FAES) is made up of five (5) Departments: Agricultural Economics, Education and Extension (AEEE), Animal Science (AS), Crop Science (CS), Environmental Science (ES) and Natural Resources (NR).

#### 6.2 2019 Registered Students Statistics

The Faculty had a total of 769 registered students.

#### 6.2.1 Postgraduate Students

The Faculty had a total of eighteen (18) registered Postgraduate students studying through research



2.1.1 Summary of Registered Students

#### Figure 1: Summary of Registered Students

From 2018 and 2019 there was an increase of 20.5% in the number of male students and 21% increase in the number of female students and there was an overall increase of 22%.

#### 6.3 2019 Graduation Statistics

A total of 354 students graduated in the year 2019.

#### 6.3.1 The graduation statistics trends

The graduation statistics trends in the Faculty were as follows:

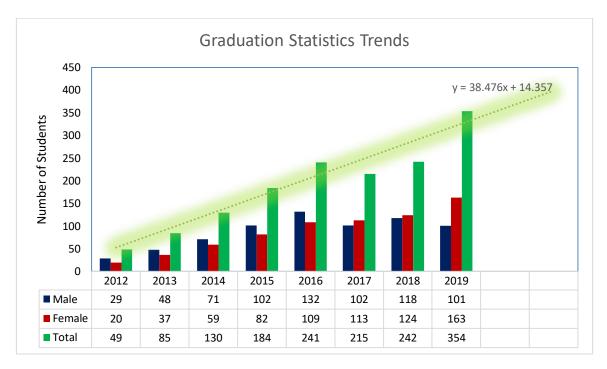


Figure 2: Graduation Statistics Trends

From 2018 and 2019 there was a 14% decrease in the number of male graduating students and 31% increase in the number of female graduating students and there was an overall increase of 46%.

A total of eight (8) students were awarded both the University Book Prize and Vice Chancellors prizes for attaining first classes per part and graduating with first classes respectively. Four (4) were awarded only the University book prizes.

A total of twenty-eight (28) students attained four (4) or more distinctions in 2018 second Semester.

#### 6.4 Staffing

Category		PhD Holders	Masters Holders	BSc Holders	Male	Female	Total
Permanent Full Time	AEEE	4	5	-	8	1	9
	Crop Science	4	2	-	5	1	6
	Animal Science	1	4	-	5	0	5
	Environmental Science	4	3	-	5	2	7
	Natural Resources	5	5	-	8	2	10

6.4.1 Summary of Academic Staff by Qualifications

Table 14: Summary of Academic Staff Qualifications

#### 6.5 **Promotion**

A faculty staff who was on a sandwich programme graduated with a PhD. This brings the number of PhD holders to 18. The drop in the number of PhD holders was due to resignations.

Six Senior Lecturers were promoted to Associate Professor Grade while one was promoted to Senior Lecturer.

#### 6.6 The Faculty PhD Status

The Faculty PhD Status per Department is as follows:

Department	PhD Holders	Registered	Not Registered
Environmental Science	4	2	1
Natural Resources	5	3	3
Crop Science	4	1	2
Agricultural Economics, Education and Extension	4	2	3
Animal Science	1	2	2
Total	18	11	8

Table 15: Faculty PhD Status

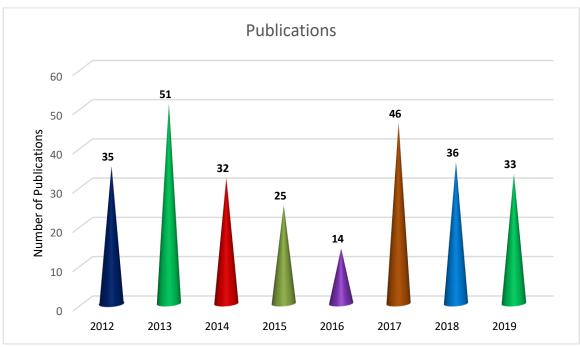
#### 6.7 Research Activities

FIELD	THEMATIC AREA	SUB-THEMATIC AREAS
Agriculture	Education and Extension	Extension approaches
	Economics and Management	Value chain management
	Horticultural and Field Crops	Crop Protection- pathology; weed science
		Conservation Agriculture
		Ethnobotany
		Flood-recession Cropping
		Soil Fertility Management
		Postharvest Management
		Integrated Water and Nutrient Management
	Livestock	Conservation of Animal Genetic Resources
		Ethno veterinary
		Livestock feed resources for drought prone areas
		Meat Science
		Animal Health
		Smallholder Dairy Cattle Improvement
Environmental And Health Science	Environmental Science	Impact assessment of agricultural projects and programmes
		Mine Dump Land Reclamation

		Restoration Ecology
		Tobacco Curing
		Waste Management
		Vegetation Diversity
	Forest and Plantation	Forest Pathology
	Science	Forest Plant Nutrition
	Health and Safety	Health and safety
		Occupational Health and Safety
		Water Quality
	Wildlife	Fisheries
		Wildlife Ecology
Cross-Cutting Issues	Agroforestry	Carbon Sequestration
		Land reclamation and Revegetation
		Soil Fertility Management
	Climate Change	Greenhouse Gas Analyses
		Water and Climate Change in Developing Countries
Table 16: Research Activ	itios	

Table 16: Research Activities

#### 6.8 FAES 2019 Publications



#### 6.8.1 Publications from 2012 to 2019

Figure 3: Number of Publications 2019

### 6.9 Externally Funded Grants

Project Title	Funding Organization	BUSE Project Team	Partners
Strengthening Zimbabwe's GBIF node through collaboration with GBIF Spain	Global Biodiversity Information Facility (GBIF) Capacity Enhancement Support Programme (CESP)	Prof. I.W.Nyakudya Prof. L Jimu	Spain
Plant community development on a Chrono sequence of abandoned gold and nickel mine tailings dumps in the great dyke region in Zimbabwe	International Foundation for Science (IFS)	Mr T Nyenda (Grant Holder)	Prof. Willis Gwenzi (Supervisor) University of Zimbabwe
Optimizing maize yield under flood recession cropping in the Zambezi valley floodplains, northern Zimbabwe	IFS International Plant Nutrition Institute (IPNI) Association of African Universities (AAU)	Ms M Chimweta (PhD student and grants Holder) Prof. I.W. Nyakudya Prof. L. Jimu	Prof. Anold Bray Mashingaidze (Supervisor) Chinhoyi University of Technology
Mobility Grant for Junior Female Researchers	Agnes-Paws	Ms M. Chimweta (PhD student and grants Holder) Prof. I.W .Nyakudya Dr. L Jimu	Dr K Kaseke Botswana University - Main Campus
Mobilization of data on non-timber forest products' species in Zimbabwe's five biodiversity hotspots: towards the enhancement of food security and human health	European Union (EU)	Dr. L Mujuru Prof. L Jimu Prof. J Muvengwi Dr. Admore Mureva Prof. I.W. Nyakudya	National Botanical Gardens Forestry Commisssion
Use of tied-contour rainwater harvesting system in small grain and legume production for improved household food security, nutrition and income in semi-arid smallholder farming areas of Zimbabwe	Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) (CARP)	Prof. G Nyamadzawo Prof. R. Mandumbu Dr. B Masamha Ms A Kamota	Magamba Training Centre
Commercialisation of sustainable broiler chicken feed with Moringa oleifera in partial substitution for soya cake	Finish Southern African Partnership (SANBio)	Prof. CT Gadzirayi	University of Venda, South Africa CODCHEM Pvt Ltd.

Table 17: Externally Funded Grants

#### 6.10 Associate Colleges

The Faculty worked with Five (5) Associate Colleges and memoranda of understanding were signed to this effect.

#### 6.11 Extension Services

The Faculty through its departments engaged in the following extension work:

Department	Activity
AEEE	Training farmers on commercialization of Agricultural projects under DREAM Training farmers on the use of Moringa based feed
Crop Science	Had been closely working with the Society for the Destitute Aged (SODA), assisting with establishment of their commercial horticulture unit. The Department has successfully planted and harvested cabbages and greenhouse tomatoes
	Some members are involved in the FURORUM project that has established water harvesting trials in Buhera and Muzarabani

Table 18: Extension Services

#### 6.12 Faculty Projects

The Faculty engaged in several commercial projects such as selling of seedlings from its nursery, poultry unit and apiary.

#### 6.12.1 Exhibitions

The Faculty was represented at local and national exhibition events where apiary related products and general departmental information was showcased. Exhibitions were made at: Mazowe valley agricultural show; the Harare agricultural show and at the Zimbabwe Trade fair

#### 6.13 Projects

#### 6.13.1 Beekeeping

The Beekeeping project did fairly well. The project had three apiaries, at Astra Campus, Chaminuka Training Centre and Chawarura Practical Skills Development Centre

#### 6.13.2 Nursery and Agroforestry Project

The nursery project was housed at ASTRA Campus.

In the year under review the Faculty managed to sell the following products:

No	Product	Cost RTG
----	---------	----------

1	Seedlings	1 956.00					
2	Eggs	117.00					
3	Honey	1 808.00					
4	Chickens	310.00					

Table 19: Project Sales

#### 6.14 Commercial Farm Unit

#### 6.14.1 Executive Summary

The 2018/19 cropping season was characterized by a lot of operational challenges. Chief among them were ZESA blackouts, unavailability of tillage equipment, fuel and Ammonium Nitrate fertilizer during critical stages of the production cycle. Trading was very difficult due to the change from the United States Dollar to the RTGS as the national currency and an unstable pricing system. The farm however managed to plant 25 hectares of commercial maize, 25 hectares of soya beans and 25 hectares of winter wheat. In the livestock section, seven (6) batches of broilers were raised, and 7, 732 birds sold. 124 porkers were also sold from the eight sow pig unit. However sow unit was gradually reduced to 5 due to infrastructure limitations. Twelve steers were sold from the beef herd and the number remaining was 48. Accommodation for both livestock and staff remained the major challenge on the farm.

#### 6.15 4.Crops

#### 6.15.1 Commercial Maize Crop (25 hectares).

A total of twenty-five hectares (25 ha) of maize was planted. ZESA was disconnected soon after planting making irrigation impossible. The maize crop was top dressed late as Command Agriculture, our funder, could not provide the much needed ammonium nitrate. The farm had to use its own resources to buy fertilizer although it was late.

#### 6.15.2 Soya Bean Crop (25 hectares).

A total of twenty five hectares (25 ha) of soya beans was planted mid-December which was rather late for the crop. The table below is a summary on the performance of the two (2) crops.

Enterprise	Area (ha)	Yield (t/ha)	Total yield (t)	Producer (\$/t)	Total income (RTGS)	CoP (RTGS)	Gross margin (RTGS)
Maize	25	3.72	93	2100.00	195 300.00	66 417.00	128 883.00
Soya Bean	25	1.52	38	2800.00	107 000.00	39 007.00	67 993.00
Winter wheat	25	1.20	30	8000.00	240 000.00	97000.00	143 000.00

Total	75		542 300.00	

Table 20: Soya Beans Crop Performance

#### 6.15.3 Winter cropping (2018/19).

A total of 25 hectares of winter wheat was planted against a target of 43 ha. The reduction was due to power cuts. Inputs enough for 18 hectares were retained on the farm for use in the summer cropping season. The wheat crop performed very well in the early stages of establishment but performance declined towards booting as a result of a three week period of drought, due to theft of ZESA cables.

#### 6.16 Livestock

#### 6.16.1 Poultry

A total of six (7) poultry batches were raised from December 2018 to October 2019. Below are the related production and sales records. The table below is a summary of performance of the batches.

Batch	5/2018	1/2019	2/2019	3/2019	4/2019	5/2019	6/2019
Supplier	Profeeds	Profeeds	Profeeds	Profeeds	Profeeds	Profeeds	Profeeds
Date	19/12/19	26/03/19	14/04/19	14/6/19	27/6/19	28/11/19	28/11/19
Received							
Number in	1400	2019	1000	1000	1000	2000	3000
Batches							
Mortality	80	59	141	157	200	21	21
Mortality %	5.7	3.5	14.1	15.7	20	2.1	0.7
Number	1320	1931	859	843	800	1979	Current
Sold							Batch
Direct	9135.30	22 647.60	16 671.54	16965.47	16301.99		
Cost\$							
Sales	12 710.00	24 186.15	22 473.50	23 231.66	18 726.60		
Value							
Gross	3 574.70	1538.55	5801.96	6 266.19	2 424.61		
Margin \$							
Gross	39	7	35	37	37	15	
Margin %							

Table 21: Poultry Batch Performance

#### Notes:

- i. Batch 2/2019 was a donation made by The Farm Trust Board Chair (Mrs T. Chimphondah on behalf of Profeeds). The package comprised of 1000 Day Old Chicks (DOC), feeds and drugs.
- ii. Batch 6/2019 with 3000 broilers was still under production by the time of report writing.

#### 6.16.2 Pig Enterprise

The farm culled the five (5) old sows and replaced them with five (5) young gilts and bought a young Duroc boar from the Pig Industry Board (PIB). Standard housing for pigs remained a major challenge as the pigs were housed in old tobacco bans.

#### 6.16.3 Beef Enterprise.

The beef herd stood at forty-four (48) beef animals. The farm lost its bull due to Anaplasmosis and Senkobo disease which affected beef animals in and around the farm. Block treatment with penicillin was carried out. The farm then relied on artificial insemination (AI) and twelve (12) cows were served through AI with the assistance from the Provincial Veterinary Services Department.

#### 6.17 Other Developments

#### 6.17.1 Bore-hole.

The farm had a borehole drilled using faculty funds. The farm bought the submersible pump and the associated accessories. However, installation of the pump had not been complete by the end of the year because of ZESA challenges.

#### 6.17.2 Farm Machinery.

The farm also repaired the ripper for use with the big tractor. Future consideration were to repair equipment like the boom sprayer, disc harrow and planter.

# 7 FACULTY OF COMMERCE

## 7.1 Introduction

The Faculty of Commerce had seven (7) departments namely:

- Accountancy
- Banking and Finance
- Human Resources Management
- Marketing
- Economics
- Graduate School of Business
- Intelligence and Security Studies

## 7.2 New Postgraduate Programmes

- Master of Science in Marketing (with specialisations in Digital Marketing, Sports Marketing, and Green Marketing). The programme was approved by ZIMCHE
- Master of Science in Human Capital Management
- Executive Master of Business Leadership.
- Master of Science in Entrepreneurship and Innovation
- Master of Leadership and Corporate Governance Degree

## 7.3 Postgraduate Programmes approved by ZIMCHE

The Master of Science in Marketing degree with specialisations in Digital, Sports and Green Marketing was approved by ZIMCHE.

## 7.4 Promoting Community Engagement Initiatives and Strategic Partnerships

## 7.4.1 Lafarge Case Studies

The Faculty started writing case studies for Lafarge Pvt Limited. Five cases studies were ready for presentation to Lafarge.

## 7.4.2 Memoranda of Understanding (MOU)

The faculty initiated Memoranda of Understanding (MOU) with the following entities:-

- Marketers Association of Zimbabwe (MAZ)
- Management Training Bureau
- BMC Markets and Chartered Systems Integration
- Digitally Smart
- Venture Science Academy
- NSSA

- LAFARGE Pvt Limited
- Lifetime Workforce Skills Hub
- Management Training Bureau (MTB)

# 7.5 Pass Rate per Programme (Post Graduate and Undergraduate)

The overall faculty average pass rate was 83%. This was a marked decline of 4% from 2018.

## 7.6 Staffing

Department	PhD	holders	Master's Degree		BSc De Holders		Professional qualifications	
	Male	Female	Male	Female	Male	Female	Male	Female
Accountancy	1	0	7	1			2	0
Banking & Finance	0	2	5	3				
Economics	4	0	4	0				
Human Resources Management	0	1	2	1				
Marketing	4	0	3	1			1	0
Intelligence and Security Studies	1	0	3	2				
Graduate School (All Part time)	2	1						
Total	12	4	22	7			3	0

#### 7.6.1 Academic Staff

Table 22: Academic Staff

## 7.7 Faculty Enrolment Statistics 2019

## 7.7.1 Conventional Student Enrolment Statistics for 2019

Programme	Part 1		Part 2	2	Part 3	3	Part 4	ļ	Totals gende		Total
	F	М	F	М	F	М	F	М	F	М	
Bachelor of Accountancy Honours Degree	82	78	64	78	48	37	34	43	228	236	464
Bachelor of Business Studies Honours Degree in Banking & Finance	-	-		-	1	2	4	1	5	3	8
Bachelor of Commerce Honours Degree in Banking & Finance	66	55	65	49	33	22	20	26	185	151	336
Bachelor of Science Honours Degree in Economics	28	20	22	14	16	4	18	5	84	43	127

Bachelor of Commerce Honours Degree in Financial Intelligence	29	26	20	18	12	14	18	13	79	71	150
Bachelor of Commerce Honours Degree in Human Resources Management	-	-	-	-	1	1	5	6	6	7	13
Bachelor of Commerce in Human Capital Management	61	17	13	12	13	11	3	9	90	49	139
Bachelor of Business Studies Honours Degree in Marketing	-	-	-		2	0	12	4	14	4	18
Bachelor of Commerce Honours Degree in Marketing	35	22	27	25	15	12	13	9	90	67	157
Bachelor of Business Administration Honours Degree in Police & Security Studies	1	2	1	2	8	22	-	-	10	26	36
Bachelor of Commerce Honours in Purchasing & Supply	76	50	27	34	31	25	2	5	136	114	250
TOTAL	343	248	207	210	163	138	103	107	894	858	1752

Table 23: Conventional Student Enrolment Statistics for 2019

## 7.7.2 Block Release Programme Enrolment Statistics for 2019

Total number of students enrolled in the Faculty of Commerce Block Release in 2019 was 630.

Programme	Part	1	Part	2	Part	3	Part	4	Totals	by gender	Totals
	F	М	F	М	F	М	F	Μ	F	М	
Master of Science Degree in Intelligence and Security Studies	10	13	12	12					22	36	58
Bachelor of Science Honours Degree in Intelligence & Security	7	7	5	16	11	16	8	22	30	61	92
Diploma in Public Relations	22	31							22	31	53
Professional Diploma in Public Relations and Corporate Reputation Management	17	8	8	3					25	9	34
TOTAL	56	59	25	31	11	16	8	22	99	137	236

## 7.7.3 Associate Colleges Enrolment Statistics for 2019

Programme	Part 1		Part 2		Part 3	}	Part 4		Totals by	v gender	Total
	F	М	F	М	F	М	F	Μ	F	М	

2019 Conventional	343	248	207	210	163	138	103	107	894	858	1752
Enrolment											
2019 Block Release	97	167	53	65	45	43			247	383	630
Enrolment											
Total Enrolment for 2019	440	415	260	275	208	181	103	107	1141	1241	2382
Table 24: Associated Colleges Engelment Otatistics in 2010											

Table 24: Associated Colleges Enrolment Statistics in 2019

## 4.14 Graduation Statistics For 2019

PROGRAMME	MALE	FEMALE	TOTAL
Master Degree in Business Leadership	13	14	27
Master of Science Degree in Economics (DS)	4	0	4
Master of Science Degree in Economics (Financial)	2	1	3
Master of Science Degree in Economics (Health)	3	0	3
Master of Science in Purchasing and Supply Chain Management	26	11	37
Bachelor of Accountancy Honours Degree	47	52	99
Bachelor of Commerce Honours in Banking & Finance	28	35	63
Bachelor of Science Honours Degree in Economics	15	13	28
Bachelor of Commerce Honours Degree in Financial Intelligence	26	18	44
Bachelor of Business Studies Honours in Human Resources Management	16	15	31
Bachelor of Business Studies Honours in Marketing	24	18	42
Bachelor of Business Administration Honours Degree in Police & Security Studies	33	9	42
Bachelor of Commerce Honours in Purchasing & Supply	26	28	54
Diploma in Office Management	1	8	9
Total	264	222	486

Table 25: Graduation Statistics 2019

## 7.7.4 Graduation Statistics from Associate Colleges for 2019

Programme	Male	Female	Total
Master of Science Degree in Intelligence and Security	16	3	19
Bachelor of Science in Intelligence & Security	17	5	22
Diploma in Intelligence & Security Studies	3	0	3
Diploma in Public Relations	31	19	50
Grand Total	67	27	94

# 7.8 Workshops in 2019

The Faculty conducted a capacity building Research Supervision workshop on 04 April 2019.

# 8 FACULTY OF SCIENCE EDUCATION

#### 8.1 Introduction

This report gives an overview of the state of the faculty including the main activities carried out in year 2019. The report highlights the performance towards teaching and other Faculty achievements. In addition, the strengths and challenges will also be outlined.

#### 8.2 Staffing

The Table below shows staff qualifications from four Departments of Curriculum Studies, Educational Foundations, Science and Mathematics Education and Educational Technology.

Department	First Degree	;	Master'		Doctorate	е	Professo	r	Total
	F	М	F	М	F	М	F	М	
Curriculum Studies	0	0	0	2	0	2	0	1	5
Educational Foundations	0	0	1	0	0	5	0	0	6
Science and Mathematics Education	0	0	0	5	4	4	0	0	13
Educational Technology	0	0	2	0	0	0	0	0	2
TOTAL			3	7	4	11		1	26

*Table 27: Academic Staff Qualifications by Gender* 

#### 8.3 PhD Studies Completion

Three faculty staff completed their PhD studies in 2019.

#### 8.3.1 PhD Studies

The table below show members of staff who were studying towards PhD degree.

GENDER	REGISTRERD STUDENTS	PRIOR TO REGISTRATION	TOTAL
Male	1	2	3
Female	1	0	1
TOTAL	2	2	4

Table 28: Number of Staff Studying Towards Attaining PhD Qualification

## 8.4 Students Enrolment by Programme and Mode

The Faculty's enrolment in 2019 comprised the following programmes for both January and August intakes as shown below.

PROGRAMME	CONVE	ENTIONAL		BLOCK				VODL	
SAMED	М	F	Т	М	F	Т	М	F	Т
DipSc.EdAg	1	1	3	0	0	0	2	0	2
DipSc.EdBz	23	164	187	2	2	4	2	2	4
DipSc.EdCh	24	103	127	0	1	1	1	2	3
DipSc.EdCSc	27	90	117	2	2	4	2	0	2
DipSc.EdGg	0	0	0	0	0	0	0	3	3
DipSc.EdMt	14	53	67	3	6	9	2	3	5
DipSc.EdPh	30	68	98	2	8	10	1	0	1
TOTAL	119	479	595	9	19	27	10	10	20
CS	М	F	Т	М	F	Т	М	F	т
BScEd	-	-	-	0	1	1	-	-	-
BScEdH	4	1	5	-	-	-	-	-	-
HBScEd	-	-	-	80	111	191	5	4	9
MScEdCs	-	-	-	3	1	4	-	-	-
TOTAL	4	1	5	83	113	196	5	4	9
EF	М	F	Т	М	F	Т	М	F	т
PGDE	-	-	-	1	2	3			
PGDTE	-	-	-	14	20	34			
MScEdBz	-	-	-	21	13	34			
MScEdCh	-	-		2	17	19			
MScEdGg	-	-	-	7	17	24			
MScEdMt	-	-	-	9	29	38			
MScEdPh	-	-	-	4	5	9			
TOTAL	-	-	-	58	103	161			
GRAND TOTAL	119	479	600	150	235	385	15	14	29
									1014

Table 29: Enrolment by Programme and Mode

#### 8.5 Faculty Graduation Statistics

The Faculty churned out a total of 560 graduates ranging from Diploma to Masters.

#### 8.6 Review and Development of Programme Regulations

- 1. The Faculty managed to amend (6) several regulations which were approved by Senate.
- 2. The Faculty successfully aligned Faculty Programmes (HBs, Masters, and PhD) with ZIMCHE Minimum Body of Knowledge (MBK) requirements.

#### 8.7 Research Activities

The Faculty saw a number of publications from lecturers though not at the expected rate. The Faculty continue to urge all members to publish so as to increase the number of publications.

Authors	Organisation 1	Organisation 2	Topic/Title	Name Of Journal
Kazunga, C., Bansilal, S.	Bindura University of Science Education	University of KwaZulu-Natal	Challenges experienced by in-service mathematics teachers in an upgrading programme: Professional development in a developing country	OISIS, accepted now in press
Kazunga, C., Bansilal, S.	Bindura University of Science Education	University of KwaZulu-Natal	An Action Process Object Schema (APOS) analysis of the conceptual understanding of application of determinants in solving systems of equations	Educational Studies in Mathematics, accepted now in press
Sunzuma, G, Maharaj, A.	Bindura University of Science Education		In-service Teachers' Geometry Content Knowledge: Implications for how Geometry is Taught in Teacher Training Institutions.	International Electronic Journal of Mathematics Education, 14 (1), 1- 14.
Sunzuma, G, Maharaj, A.	Bindura University of Science Education		Teacher-related Challenges Affecting the Integration of Ethno-mathematics Approaches into the Teaching of Geometry	EURASIA Journal of Mathematics, Science and Technology Education, 2019, 15(9), 1-15.
Sunzuma, G, Maharaj, A.	Bindura University of Science Education		In-service Secondary Teachers' Teaching Approaches and Views Towards Integrating Ethnomathematics approaches into the Teaching of Geometry	Bolema (accepted)
Mr. Z. Ndemo	Bindura University of Science Education	University of Zimbabwe	High students' struggle with contextualized differential equations. (2019)	Int. Journal of applied Mathemtics and theoretical Physics, 5 (1), 20- 31.
Ndemo Z, Mtetwa. DKJ, and Zindi, F	Bindura University of Science Education		What should be the object of research with respect to the concept of mathematical proof. (2019)	Journal of education and learning , 13 (2), 7-16
Dr. L. H Mutambara	Bindura University of Science Education		"An explanatory study on the understanding of the vector space concepts".	
Mr. C Bhukuvhani	Bindura University of Science Education		"Towards a framework for understanding the influence of selected aspects of culture on secondary school	Zimbabwe Journal of Educational Research.

		students' learning of stoichiometry: Insights from a preliminary study"	
Mr. C Bhukuvhani	Bindura University of Science Education	book chapter "Towards Sustainable Industrialization and Modernization in Zimbabwe through universities linkages: Policy, research and Practice" (2019)	Research Symposium Book 2019.
Mr. C Bhukuvhani, Mutanga P. and Nezandonyi J.	Bindura University of Science Education	"Enhancing Engineering Education through Technological Pedagogical and Content Knowledge (TPACK).	and Development using ICT.14 (3) 38-49
Dr P.V. Moyo and Prof Ramirez	Bindura University of Science Education	Zimbabwe Science Learning at Secondary School Level Through Multicultureal Science Education	

Table 30: FSE Publications

#### 8.8 Workshops/ Conferences

Faculty Staff facilitated the following workshops:

- 1. Prof N. Rudhumbu facilitated on a 3 day workshops on research processes targeting the University community
- 2. Miss T. Chikerema facilitated Technology Integration to Teachers in Harare
- 3. Dr V Mpofu facilitated a Research Workshop for Post Graduate Diploma Students at BUSE.
- 4. Dr P.V. Moyo facilitated a Research workshop at Mutare Teachers' College.

#### 8.9 Extension Services

The Faculty commends the following members of staff for being able to extend their knowledge to the community through a variety of activities as follows: -

- Prof N Rudhumbu, Dr N. Zezekwa, Dr Nyikahadzoyi and Dr D. Dziva attended a UNICEF sponsored workshop at Red Cliff Hotel on Competence Based Curriculum in Ocober 2019
- 2. Mr Kusure facilitated at a staff development workshop held at Pachedu Junior Academy in Mount Darwin in January 2019.
- 3. The Faculty co-hosted the STEM Teacher Trainer Workshop with UNESCO which was held from 28<sup>th</sup> October to 1 November 2019 at the University.

#### 8.10 Programme Projects

The Faculty developed the Off Campus Learning Model for students to learn in the comfort of their homes. Off Campus Learning Model training on uploading of learning material on the Moodle platform was done to Faculty Staff.

#### 8.11 Setting Up External Campus in Namibia

The Faculty compiled documents required for accreditation in order to set up the Namibia Science Education Campus.

# 9 FACULTY OF SCIENCE AND ENGINEERING

## 9.1 Introduction

2019 was an eventful year for the Faculty of Science and Engineering despite the economic challenges. Information provided below summaries what transpired during the academic year.

## 9.2 Staffing

0			
Qualification	Male	Female	Total
Professors	4	2	6
Doctorate	18	7	25
Masters	21	14	35
Honours Bachelors	2	0	2
TOTAL	45	23	68

## Figure 4: Summary of Faculty Academic Staff Statistics

Number studying towards PhD: 4 Females and 8 Males.

## 9.3 Staff Movements

- One member from the Department of Health Sciences retired.
- Six Academic staff members resigned.
- Two Academic support Staff members resigned.

## 9.4 Achievements

## 9.4.1 Staffing

Three (3) PhD joined the Faculty, One in the Department of Geography, one in the Department of Engineering and Physics and another one in the Department of Biological Sciences.

Three (3) Lecturers graduated with PhD Degrees. Two (2) from the Department of Engineering and Physics and one from the Department of Computer Science.

Prof Chingwaru was promoted to Associate Professor Grade.

## 9.4.2 New Programmes

MSc Sports in Management - first intake in December 2019

MSc Disaster Risk Management - first intake in December 2019

## 9.4.3 Change of Faculty Name

Faculty of Science was renamed Faculty of Science and Engineering, an expansion that was necessitated to accommodate the creation of the Engineering and Physics Department which was an offshoot from the Physics and Mathematics Department.

## 9.4.4 New Departments

## 9.4.4.1 Department of Optometry

The BUSE Optometry Clinic was established and will serve as both a teaching and consultation facility. The University is currently processing the registration of the Clinic with the Ministry of Health and Child Welfare.

A fully equipped Optical Dispensing Workshop was set up.

A Pre- Clinical Optometry learning unit with four consulting rooms was established.

## 9.4.4.2 Department of Engineering and Physics

## 9.5 Equipment

The department received a donation of State of the art optometry equipment from Mr. Finn Juncker, a Danish Optometrist and Philanthropist, for practical purposes and 3000 finished glasses meant for people in the underprivileged communities. The equipment included USD 14,000 worth of Brand new Ophthalmic & Dispensing equipment and many slightly used ones.

## 9.6 MOU with PSMI

A Memorandum of Understanding was signed with the Premier Services Medical Investments for cooperation in the training of Optometrists and they donated 80 pairs of unfinished lenses for practical purposes.

## 9.7 Grants

- Prof Chingwaru and Team were awarded the Microsoft Azure utility Grant worth USD30 000.
- The Department of Chemistry received from the Ministry of Higher, Tertiary Education, Science and Technology a grant of ZW\$288,000 for the Antifungal project. It also received another grant of ZW\$5000 from the Research and Post-Graduate Centre.
- An MSc in Climate Change and Sustainable Development student, was awarded a US\$3000 grant for research from the Zimbabwe Resilience Building Fund (ZRBF), in partnership with the Zimbabwe Ministry of Lands, Agriculture, Water, Climate and Rural Resettlement.
- The Department of Geography in collaboration with the World Vision obtained some grants for improving the socio-economic lives of the communities which were vulnerable to disasters such as those in Mbire and Muzarabani. Members of the department started the mapping of the flood areas. The project was on going.
- The Department of Geography in collaboration with the Bindura Municipality accessed some local grants to work on a project on GIS Based Utility Management System for Bindura Municipality. The team was through with Phase 1 of the project in which data had been collected and digitized. The project was on going.

## 9.8 Staff Awards:

Prof Desmond Manatsa, the Dean of the Faculty of Science and Engineering was honored with the RULAR AWARD from the World Research Council as the best researcher for 2019 in the field 'Ozone Impacts in Climate Science'.

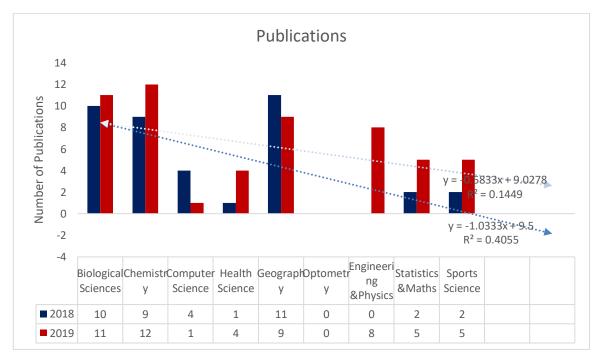
## 9.9 ZINGSA Project

Prof Manatsa was involved with the Zimbabwe National Geo-spatial and Space Agency (ZINGSA) project under the Ministry of Higher and Tertiary Education Science and Technology Development. The first phase was expected to be complete by end of March 2020.

Department	2018	2019
Biological Sciences	10	11
Chemistry	9	12
Computer Science	4	1
Health Science	1	4
Geography	11	9
Optometry	0	0
Engineering and Physics	0	8
Statistics and Mathematics	0	2
Sports Science	2	5
TOTAL	37	52

## 9.10 PUBLICATIONS





#### Figure 5: Faculty Publications

#### 9.11 Conclusion

The Faculty embraced the Education 5.0 philosophy enunciated by the Ministry of Higher and Tertiary Education, Science and Technology Development with some remarkable success. Students were engaged in various projects despite challenges with the acquisition of resource materials.

# **10 FACULTY OF SOCIAL SCIENCES AND HUMANITIES**

## 10.1 Introduction

The Faculty of Social Sciences and Humanities is housed at Town Campus along Boarder Gezi Avenue. The Faculty is made up of three (3) Departments, namely, Language and Communication Skills (LCS), Peace and Governance (PG) and Social Work (SW).

## 10.2 **2019** Registered Student Statistics by Gender and Programme

LEVEL	SEMESTER	TOTAL FIRST TAKERS		TOTAL REPEATERS		TOTAL
		Male	Female	Male	Female	
1	1	17	62	0	0	79
2	1	17	95	0	0	112
2	2	0	0	0	1	1
3	1	24	67	0	0	91
4	1	26	68	0	0	94
4	2	1	0	2	0	3
-	Total	85	292	2	1	380

#### 10.2.1 Department of Social Work

 Table 32: Department of Social Work Enrolment

#### 10.2.2 Department of Peace and Governance

		•				
LEVEL	SEMESTER	TOTAL FIRST TAKERS		TOTAL REPEATERS		TOTAL
		Male	Female	Male	Female	
1	1	18	88	1	0	107
1	2	0	0	0	1	1
2	1	26	97	0	0	123
2	2	0	0	1	1	2

3	1	29	69	0	0	98
3	2	3	1	0	1	5
4	1	27	81	0	0	108
4	2	0	0	3	1	4
	Total	103	336	5	4	448

Table 33: Registered Students Department of Peace and Governance

## 10.3 Department of Languages and Communication Skills

LEVEL	SEMESTER	TOTAL FIRST TAKERS		TOTAL REPEATERS		TOTAL
		Male	Female	Male	Female	
1	1	8	15	0	0	23
2	1	8	14	0	0	22
	Total	16	29	0	0	45

GRAND	TOTAL	204	657	7	5	873

Table 34: Registered Students Department of Languages and Communication Skills

#### 10.4 Summary of Registered Students

Year	Male	Female	Total
2016	495	382	877
2017	440	460	880
2018	222	628	850
2019	204	657	861

Table 35: Summary of Registered Students

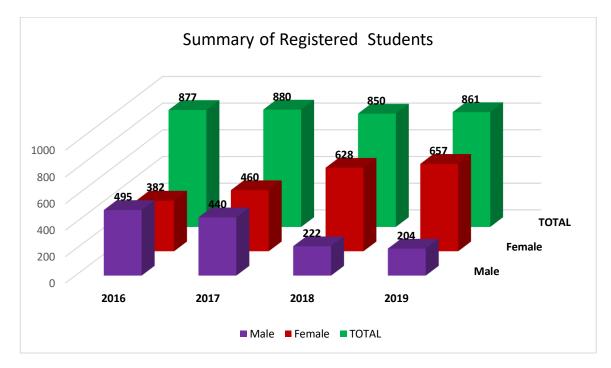


Figure 6: Summary of Registered Students

The Faculty had a decrease of 59% in the number of male students and 72% increase in the number of female students and an overall decrease of 1.8%.

#### 10.5 Staffing

#### 10.6 Staff Development

One of the Faculty strategic goals was to increase the number of PhD holders. The Faculty staff responded by enrolling for PhD studies with various institutions under the split site arrangement:

Ten (10) members of staff were undergoing PhD studies. Nine (9) were on sandwich programme while one (1) was on full time study leave.

Summary	Number	Percentage (%)			
Professor	1				
PhD Holders	11	44.4			
Registered for PhD	10	40.4			
Not Registered for PhD	5	14.8			
Total	27	100			

#### 10.7 The Summary of Faculty PhD status

#### Table 36: Summary of Faculty PhD Status

#### 10.8 Student Pass Rates during the Course of the Year

During the year under review student pass rates continued to improve. The mean pass rate [ $\pm$  standard deviation (SD)] was 97.5  $\pm$  4.2 in August 2019 compared to 74.0  $\pm$  4.9

in 2018. This was partly attributed to adherence to quality assurance measures and tutorials for courses in which students faced difficulties.

#### 10.8.1 Postgraduate Students

The Faculty had a total of six (6) registered Postgraduate students studying through research as follows;

	Name	Registration Number	Level
1.	Massimo Charles	B1544607	DPhil
2.	Nyamurera David	R943387	DPhil
3.	Tarwireyi Felix	B1645462	DPhil
4.	Ruparanganda Linnah	B1645462	DPhil
5.	Chakanyuka Rumbidzayi	R98402811	MPhil
6.	Ndhlukulwami Lynette	B1646529	MPhil

## Table 37: Postgraduate Students

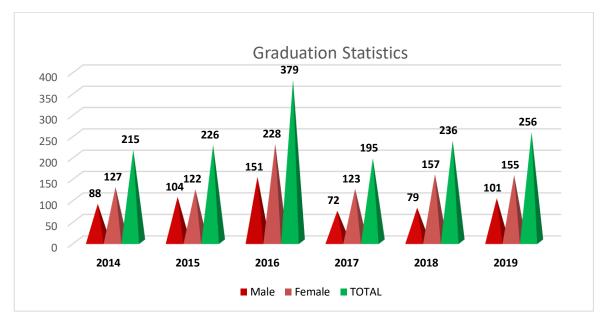
## 10.9 2019 Graduation Statistics by Gender and Programme

NO	PROGRAMME	MALE	FEMALE	TOTAL
1.	Master of Science in International Relations	9	13	22
2.	Master of Science in Peace and Governance	11	4	15
3.	Bachelor of Science Honours Degree in Peace and Governance	43	77	120
4.	Bachelor of Science Honours Degree in Social Work	35	61	96
5.	Postgraduate Diploma in International Relations	2	0	2
6.	Postgraduate Diploma in Peace and Governance	3	0	3
	FACULTY TOTAL	101	155	256

Table 38: Graduation Statistics by Gender and Programme

## 10.9.1 Graduation Statistics Trends

Graduation Statistics for the past two years were as follows: -



#### Figure 7: Graduation Statistics

The Faculty had 28 % increase in the number of male graduating students and 1% decrease in the number of female graduating students an the overall increase of 8 %.

There was 8% percent increase in the number of graduands from 2018 to 2019.

#### 10.10 Promotion

The Dean of the the Faculty of Social Sciences and Humanity, Professor Charles Pfukwa attained his full professorship on the 26<sup>th</sup> of September 2019.

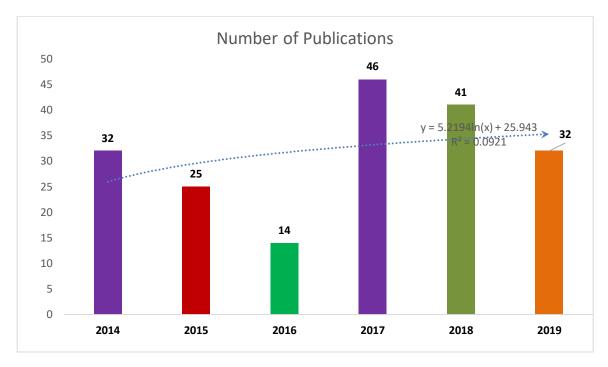
## 10.10.1 Research Activities

The Faculty had a total of thirty - two (32) publications in 2019.

Overall percentage improvement in number of publications

	YEAR	NO.
1.	2014	32
2.	2015	25
3.	2016	14
4.	2017	46
5.	2018	41
6.	2018	41
7.	2019	32

Table 39: Publications



#### Figure 8: Number of Publications

The Faculty had a 22% decrease in the number of publications BUT the quality of publications improved as the Faculty concentrated on publishing in high impact institutionally accredited journals.

#### 10.11 External Examiners

All the three (3) departments had external examiners who apart from reviewing the examinations and moderating scripts, also gave valuable teaching tips and suggestions to the departments.

#### 10.12 Partnerships/Collaborations

#### 10.12.1 Peace and Governance Internship Fellowship Programme 2019

An Internship Fellowship Programme (IFP) for universities in Zimbabwe was launched at UNDP Arundel offices in Harare. IFP seeks to build an effective national talent pool of young peace builders in Zimbabwe and to promote collaboration through linking the Government of Zimbabwe, National Peace and Reconciliation Commission, Universities, Non-State Actors and the United Nations (UN) System in promoting peace, reconciliation and social cohesion in Zimbabwe.

The Peace and Governance Department from Bindura University of Science Education participated and sent four students to the first cohort of 20 fellows drawn from MSU, NUST, HIT, AU and GZU. Dr Crispen Muchemwa and Dr Obediah Dodo sit in the IFP national Steering Committee.

## 10.12.2 Social Work - Elhra Project

The Department of Social Work partnered with Childline Zimbabwe on the project titled Elhra and a Memorandum of Understanding was signed between the two institutions.

## 10.12.3 Social Work - DAPP Project

The Department of Social Work partnered with the Development Aid from People to People (DAPP) under a project titled "TVET for all through Public-Private Partnerships in Zimbabwe". The specific objective of the project was to improve completion of vocational education and training and transition into labour market among disadvantaged and vulnerable youths in Shamva and Bindura Districts.

## 10.13 Faculty Clubs

Community engagements were done through various Faculty clubs: Salaam Foundations, Foundations for the Underprivileged and the Disabled and the Sea of Love club.

## 10.14 Extension Services

The Departments embarked on various Extension Service activities in a bid to increase the Faculty and University visibility. Activities done in 2019 were as follows: -

## 10.14.1 Community Radio

The Faculty was working on the establishment of the Community Radio that would service the Bindura University Community and the Province at large. The Faculty held a stakeholder consultative breakfast meeting at Mayfair Lodge in November 2019 with regard to setting up a community radio. The Faculty also consulted stakeholders on the proposal for Masters, Undergraduate and Short courses in Media and Communication at the consultative breakfast meeting.

#### 10.14.2 Culture Week

The Department's Part 4.2 students visited Ran Mine Primary school under the Step to Step programme from the 27<sup>th</sup> of February to the 6<sup>th</sup> of March 2019 with regards to the Culture week.

## 10.14.3 Visit to Chipadze Primary School

The Social Work team visited Chipadze Primary School on the 20<sup>th</sup> of March 2019. The Head of the team introduced them to the orphans and vulnerable children. One of the teachers highlighted the importance of psycho-social support among the children who were affected by social economic situations at home. The team also conducted activities which included quiz, drama and discussions for upcoming events.

#### 10.14.4 Red Cross Activities

The Department of Social Work was working with Red Cross Zimbabwe in offering sexual and reproductive health to students. In October 2019, the Department held the Miss Red Cross Concert which emphasized on the core values of sexual reproductive health.

## 10.14.5 Friendship Bench

The Department of Social Work was working with the Youth Friendship Bench in training students to offer psycho-social support and counselling to students facing challenges during their stay at the University.

## 10.14.6 Social Work Day Commemorations

The University held the Social Work Commemoration Day in March 2019.

## 10.14.7 International Day of Peace

Commemorations of the International Day of Peace were held in July 2019.

#### 10.14.8 Africa, Independence and Heroes Day Commemorations

Commemorations of the Africa, Independence and Heroes Days were held in May, April, and August 2019.

#### 10.15 National Peace and Reconciliation Commission (NPRC)

The National Peace and Reconciliation Commission (NPRC) was working on the decentralization of its work to Provinces and District.

Dr C. Muchemwa was appointed as the Deputy Chairperson for the Mashonaland Central Province Peace Committee and also a Committee member of the Research and Knowledge Management Committee.

#### 10.16 Conclusion

The Faculty continued to strive for excellence in teaching, research, extension services and entrepreneurial skills development.

# 11 CENTRE FOR EDUCATIONAL TECHNOLOGIES INNOVATION AND DESIGN

#### 11.1 Introduction

The report carries highlights of the 2019 activities. Generally, 2019 was characterised by erratic power supplies, poor Internet connectivity as well as inadequate ICT resources to support users with.

#### 11.2 Achievements

#### i) Blended Learning - Training and general usage

2019 witnessed an increased adoption and use of blended learning (a mix of web-based teaching supported by human touch and media) across all faculties in the University as the Centre scaled up trainings for both staff and students. The training focused on online content development, Moodle LMS features and how to effectively blend them into day-to-day learning and teaching, Google Suite for Education, Google productivity tools for office management, web conferencing using Zoom and Google Meet, to mention but a few of the areas covered.

#### ii) Outreach -Community Engagement

- ZAEC ICT Teachers Training: The CETID team held a 5 day training workshop for the Zimbabwe Army Education Corps (ZAEC) ICT Teachers from all their schools countrywide on "Integration and Application of ICTs in the learning environment." Participants were assisted to develop their techno-pedagogical competencies needed for effective use of technology in producing professional documents, lesson planning, research, communication, problem solving and professional development.
- UNESCO-KFIT Workshop: The Director led a team of Facilitators to Masvingo Teachers'College to teacher educators from Masvingo, Bondolfi and Morgenster Teachers Colleges under the UNESCO\_KFIT's ICT transforming Education project. The training focused on digitising instructional materials in Teacher Education and marked the end of the UNESCO\_KFIT project cycle.

#### 11.3 Conclusion

The Unit has continued to offer e-learning training and support to the University Community despite challenges of inadequate resources and staffing. The response towards use of technology has been encouraging. Had resources been permitting, more on-line support would have been given in form of trainings, workshops and seminars to keep abreast with the ever-changing learning landscape.

# 12 INFORMATION & COMMUNICATION TECHNOLOGY DEPARTMENT

## 12.1 Internet

The following Internet/Wifi projects were undertaken in the year:

- (i) Wifi at Mt Darwin campus was expanded to cover outdoor areas
- (ii) Bandwidth increased from 150mbps in 2019 to 350mbps in 2020 as a response to the demands of online learning
- (iii) More Wireless Access points were acquired and installed at New Site

#### 12.2 IUMS Development

The following modules were developed and completed in the year

- Online Application
- Completion and testing of Calculation of degree Classification
- Transcripts
- Online Transcript clearance and applications
- Examinations Access control module

#### 12.3 ICT Infrastructure

- 80 new desktop computers which were ordered in 2019 were delivered in 2020 and installed
- New server was acquired, configured and setup for e-learning and IUMS systems.
- The BUSE website was upgraded with additional web pages added
- New internet fibre cable was laid at Astra Geography department to restore and improve internet connection.
- Additional Access Point was installed at Astra around Dean's offices to improve wifi connectivity
- Data cabling works completed at the Commerce Faculty.
- Sophos Firewall licence for 2020-2021 was acquired and installed to improve network security

#### 12.4 Cloud Computing

The following services were uploaded to the Cloud

- e-Library
- e-Research portal
- e-Learning
- Library website
- Main BUSE website

## 12.5 Staffing

Three additional software developers were recruited but two left the institution within the year

One Network engineer was recruited in 2019 and started work in January 2020

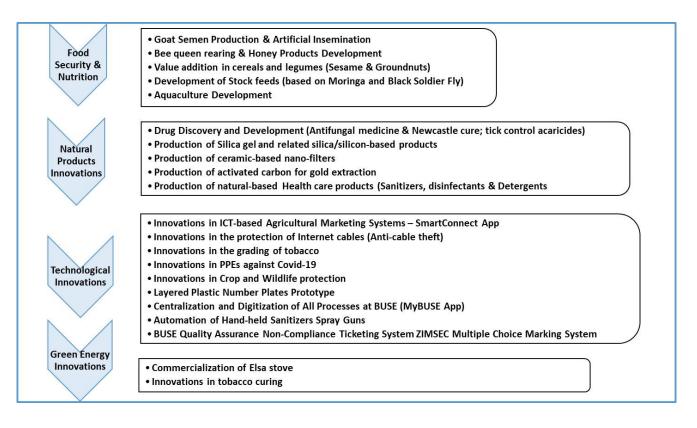
# 13 Research and Post Graduate

In 2019, Bindura University of Science Education continued to justify its claim on the fiscus by delivering key research and innovation outputs and outcomes that answer to national and global development challenges. This was achieved through a programmatic implementation of the University's 2019-2023 Strategic Plan guided by 6 Directives.

#### 13.1 Strategic Directive 1: To pursue excellence in Research and Innovation

In pursuit of objectives under this strategic directive, the University implemented a number of strategies aimed at sustaining an environment characterized by innovation, discovery, collaboration, inquiry and engagement. This involved putting in place policies and instruments to promote high impact publications, supporting collaborative research, establishing and nurturing signature research programmes aligned to national research priorities areas, as well as establishing Centres of Excellence. Key deliverables under this strategic directive include Flagship Research and Innovation Programmes established and Centres of Excellence established.

## 13.2 Research and Innovation Flagship Programmes



#### 13.2.1 Capacity building on water harvesting technologies

The programme seeks to evaluate the use of Tied Contour-Rain Water Harvesting (TC-RWH) technology, integrated nutrient management and crop intensification on the productivity and yields of small grains and legumes in selected semi-arid areas in Zimbabwe. Initiated in 2018 and supported by the RUFORUM Grant, the programme continued to impart key skills in several smallholder farming communities in 2019.

#### 13.2.2 Bee queen rearing and honey products development

The project seeks to reach production capacity of at least 10, 000 queen bees annually by 2025. Four apiaries with a capacity of 400 hives have already been established in Mashonaland Central and required queen-rearing equipment has been procured. Acquisition of remaining queen rearing equipment in progress.

#### 13.2.3 Value addition of cereals and legumes focusing on groundnuts and sesame

The cereals from legumes and sesame are at advanced stages of development and should be available on the market by end of 2020. A prototype is being finalized for patent protection.

#### 13.2.4 Discovery and Development of Newcastle Virus Disease cure

The Drug Discovery Group is working on a possible cure for Newcastle Disease in poultry. Preliminary scientific tests have shown promising results and application for a provisional patent has been lodged with the Zimbabwe Intellectual Property Office (ZIPO).

#### 13.2.5 Development of antifungal medicinal products

This project is funded by the Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development and it seeks to develop an antifungal drug based on locally available medicinal plants. A patent on preliminary findings has been filed with ZIPO.

# 13.2.6 Developing an acaricide based on indigenous ethnoveterinary plants for tick control in livestock

Tickborne diseases of livestock cause economic losses through animal deaths, reduced animal production, lost draught power, lost food source, costs of treatment and prevention. Treatment and prevention have a significant strain on scarce foreign currency as raw materials for drugs and acaricides are imported. Continued acaricide use has risks of the development of resistance by the local ticks. There is a need to establish alternate products that can be availed easily and at low cost. The current project seeks to evaluate a potential plant extract for use an acaricide.

## 13.3 Project-based learning Programme

The programme seeks to research into, and establish project-based learning (PjBL), which is a non-traditional teaching model that seeks to better prepare students for solving real-world problems and issues while teaching them what they need to know to succeed in school right now.

## 13.4 Establishment of Centres of Excellence

The University established 6 Centres of Excellence namely Science, Technology, Engineering and Mathematics (STEM), Food Security and Climate Change, Disaster Management, Data Analytics and Artificial Intelligence Centre and lastly Research Ethics

## 13.5 Strategic Directive 2: Commercialization of Research Output

## 13.5.1 Key Commercialization projects

The Institution has established a robust ecosystem which seeks to ensure research and innovation products are commercialized. To this end, significant progress has been made on the following projects:

- Commercialization of Moringa-based stock-feed
- Development of Innovative Agricultural Products Marketing System
- Development and Commercialization of Silica-based products

## 13.6 Intellectual Property Protection

To date, the Institution filed for protection of intellectual property as shown below

Title	Form of IP Filed	Description	Filing Date
Newcastle cure medicine (Newcas cure) and medication methods	Patent (ZIPO)	Provisional Specification	02-11-2017
Herbal Hair Shampoo Composition	Patent (ZIPO)	Complete specification	02-11-2017
Commercialisation of sustainable broiler chicken feed with Moringa oleifera in partial substitution for soya cake	Patent (ARIPO)	Complete specification Application No.: AP/P/2017/010085 *Substantive examination completed in 2020. Application requires revision	18-07-2017
SMART Connect	Copyright (Deeds Office Zimbabwe)	Copyright © SMART connect 2016 Bindura University of Science Education granted in 2016	2016
BU-INNOVATIONS	Trademark (ZIPO)	BUINNOVATIONS Class 31 (No. 529/2018) (In respect of Agricultural, horticultural, forestry products and grains not included in other classes) granted in 2018	06-07-2018

## 13.7 Strategic Directive 6: To promote institutional financial sustainability

The Grants attracted by the Institution in 2019 are shown in the Table and Figure below.

Funding agency	Project	Year awarded	Amount (USD)
Seeding Labs Instrumental Access	Building Laboratory Capacity through increasing Instrumental Access	2019	150, 000
European and Developing Countries Clinical Trials Partnerships (EDCTP)	Strengthening ethical oversight of clinical trials in Zimbabwe through establishment of Research Ethics Committees (RECs) and development of online ethical clearance and health research database in Zimbabwe	2019	326, 140
Global Challenges Research Fund (GCRF) awarded by the Biotechnology & Biological Sciences Research Council (BBSRC)	"CONNECTED-Community Network for africaN vector borne plant viruses"	2019	37, 580
National Geographic Innovation	Artificial Intelligence for Water Hole Cyanide Detection in Game Parks	2019	30, 000
Finn Juncker, (based in Denmark)	Optometric equipment	2019	20, 500
Childline	A comprehensive Review of the existing practices used in measuring the impact of Gender Based Violence (GBV) Programming	2019	7, 900

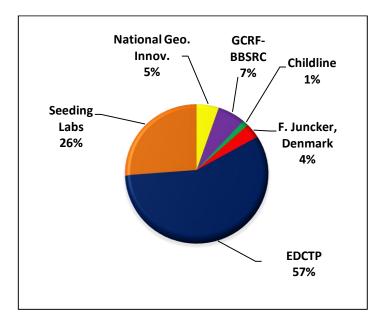


Figure 9:External grants attracted in 2019

## 13.8 Nationally-funded Projects

Project	Year	Funder	Amount
Zimbabwe Geospatial and Space Agency (ZINGSA) – Redefining agro- ecologocial regions for the transformation of the agricultural sector and assist in effective use of natural resources	2019	Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development thorough Research Council of Zimbabwe	RTGS 211, 000
Extraction and Characterisation of Antifungals, Hair growth Stimulants and Bioactive Permanents from traditional herbs.	2019	Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development	RTGS 278, 000

Table 40:Nationally funded projects

#### 13.9 2019 Publication Count

Table 41:2019 Publications

#### 13.10 Higher Degrees Enrolment Statistics

The number of higher degrees students enrolled at the Institution continues to increase as shown in the below:

FACULTY	INDIVIDUAL PUBLICATIONS	COLLABORATIVE (INSTITUTIONAL)	COLLABORATIVE PARTNERSHIPS	TOTAL	AVERAGE PUBLICATIONS PER LECTURER
FAES	2	20	20	42	14
FSE	2	-	6	8	2.6
FS & Eng.	20	6	29	54	18
FSSH	13	21	6	42	14
FOC	3	2	13	18	6
LIBRARY	-	1	-	1	0.3
TOTAL	40	50	74	164	54.9

- Faculty of Social Sciences and Humanities: 4 Students
- Faculty of Science Education: 2 Students
- Faculty of Agriculture and Environmental Science:10 Students
- Faculty of Commerce: 12 Students
- Faculty of Science and Engineering: 9 Students

# **14 STUDENT AFFAIRS DIVISION**

#### 14.1 Introduction

Despite the prevailing challenging economic climate, the Division of Student Affairs worked tirelessly to create a conducive environment that fosters students' overall

development. Success was achieved through team work and collaborations by all the sections in Student Affairs including the student body. The sections: -

- Student Health
- Catering Services
- Residential Accommodation
- Off Campus Life and Student Financial Assistance
- Sports and Recreation
- Chaplaincy
- Campus Life and Student Development Programmes
- The Student Union in General

## 14.2 Campus Life and Student Development Programmes

The number of student clubs increased from 17 to 25.

The year was quite eventful with increased club participation which saw BOOST/ENACTUS making history by winning the 2019 ENACTUS National Competitions and Advisor of the Year awards simultaneously at the Rainbow Towers, Harare. However, the students were denied visas to enter into the United States of America. The same club won the Best Social Media award in the Delta Make a Difference competition during the same period.

## 14.3 Student Health

The Student Health Services maintained its practice of delivering quality services to its clientele. During the year under review, 8 887 cases were attended to as compared to 10 447 in 2018. Service provision included educational programmes to staff and students. Nurses were trained in Youth Friendly Services, Elimination of Mother to Child Transmission Validation and Pre Exposure Prophylaxis management.

## 14.4 Residential Accommodation

Administration of residential accommodation continued to improve especially on the aspect of education on health and hygiene. Whilst staff were making a concerted efforts to maintain clean standards in the hostels, the section was being affected by financial constraints in the procurement of cleaning consumables.

## 14.5 Off Campus Life and Student Financial Assistance

## 14.5.1 Off Campus Life

In a bid to increase the choice and variety of accommodation space for students, the section embarked on a drive to open more boarding houses. The initiative resulted in an additional 8 boarding houses being opened raising the number of registered boarding houses to 175 from 167. The number, however, later went down to 164 as 11 homeowners withdrew their houses for various reasons. The Coordinator off-campus life assisted conventional and post-graduate students to secure accommodation off-campus without hassles. An estimated 3 500 students were accommodated in boarding houses during the February to June 2019 semester, while 3 800 were resident in boarding houses for the August to December 2019 semester.

#### 14.5.2 Student Financial Assistance

The year 2019 was generally a difficult year for disadvantaged students leading to an increase in the number of students seeking financial assistance. A total of 103 students were assisted through various scholarships and 53 through the work-study programme. The Student Representative Council contributed \$4 000 towards the work-study programme.

#### 14.6 Catering Services

The section managed to cater for all planned University activities including outside events. Effective service delivery on a day to day basis was affected by the absence of a catering vehicle.

## 14.7 Chaplaincy

The Chaplaincy Desk continued to be a pillar of support in the provision of spiritual counselling and care. The Chaplain provided spiritual support through devotions and prayers to University functions that included the University hour of worship, the 2019 Graduation Ceremony, SRC Induction and Orientation Programmes. Welfare issues were top priority on the Chaplaincy Desk as evidenced by the numerous engagements with departments, visits to the sick and counselling with students and staff. However, lack of transport and communication resources affected the effective execution of duty by the Chaplain.

## 14.8 Sports and Recreation

The Section suffered a severe blow when all sporting equipment and machinery was lost when the state of the art University gymnasium was destroyed in a fire accident. Despite the setback, there was a remarkable growth in terms of mass participation in sports by staff and students. All set sporting fixtures for the year under review were fulfilled. The table below outlines achievements of the various sports codes in 2019.

Gold	Silver	Bronze	Total	<b>Overall Position</b>
1			1	
	1		1	
1			1	
	1		1	
3	2	2	7	
3	3	2	8	
		1	1	
		1	1	
	1		1	
8 Gold	6 Silver	6 Bronze	22 Medals	4 out of 14
	1 1 3 3	1         1         1         1         3         3         3         1         1         1         1         3         1         1         1         1         1         1         1         1         1         1         1	1.111.1.323321.1111	1111111111113273328111111111

Table 42: Achievements of Sports Discipline

The Basketball team which was playing in the Harare League was promoted to the 'A' league (the elite league) which saw its matches being screened on television during

weekends. The University which was in the Division 2 Soccer League finished the season at position 5 out of 18 teams. Morale in the soccer team and other sport codes was low due to non-payment of winning bonuses.

#### 14.9 Student Discipline and Conduct

The general behaviour and conduct of students was commendable throughout the year. Cases of indiscipline brought to the attention of the Student Disciplinary Committee remained at 9 in 2019. The same figure was recorded in 2018

#### 14.10 Conclusion

The report acknowledges with sincere gratitude the daily efforts by staff in Student Affairs to develop and sustain the BUSE brand through providing day-to-day services and responding to multiple student needs within the University. In doing this the Division believes it was contributing to building an inclusive and welcoming community for the holistic development of students.

# **15 QUALITY ASSURANCE DEPARTMENT**

#### 15.1 Introduction

The Quality Assurance Department was established in 2015. The Department aims to fulfil the quality standards set by the Zimbabwe Council for Higher Education (ZIMCHE) and observe the statutes of the Standards Association of Zimbabwe (SAZ) in order to improve and uphold the quality of training and services; and to be an ISO

9001:2015 certified university through monitoring quality standards in teaching, research and extension services as well as support services.

#### 15.2 Quality Assurance Policy Statement

Quality assurance at the Bindura University of Science Education seeks to develop the institution into a hub of excellence through cultivating a quality culture in all its activities in order to produce competent and universally employable graduates.

#### 15.3 Staffing

The Department had four (4) members of staff

#### 15.4 Activities

#### 15.4.1 Spot Checks

The department carried out Spot Checks at lecture venues and hostels to assess the readiness of the university to start the semesters. In this vein, the department checked on cleanliness of hostels and other facilities used by students.

#### 15.4.2 Examinations Monitoring

The department monitored the conduct of examinations and observed that most invigilators were adhering to University examination procedures. However, there was need for the University to continually train examination facilitators on examination processes and procedures.

#### 15.4.3 Quality Assurance Audits

The Department carried out Quality Assurance audits in collaboration with Quality Assurance Auditors. The aforementioned audits were carried out from October to December 2019. It was evident that the audits were contributing to the improved quality of activities in the departments.

#### 15.4.4 Quality Assurance Guideline Adherence

The department carried out spot checks in both Academic and Academic Support departments to check adherence to Quality Assurance guidelines and standards. It was encouraging to note that departments had started to appreciate the importance of quality assurance standards and guidelines, as shown by an improved adherence to the same.

#### 15.5 Achievements

The Department engaged two new Quality Assurance Officers in 2019 and this resulted in the enhancement of the department's visibility. Consequently, the engagement of these officers resulted in a marked improvement in departmental output as shown by the completion of:

- 1. The Quality Assurance Manual which seeks to help constituents understand assessment in the context of Quality Assurance that results in continuous quality improvement. It also describes the overall organization of the university with emphasis on authorities and responsibilities related to quality.
- 2. The Quality Assurance Policy which ensures that the institution is developed into a hub of excellence through the cultivation of a quality culture in all its activities, in order to produce competent and universally employable graduates. The policy also ensures that there is an appropriate quality assurance system (a set of quality assurance policies, procedures and performance indicators) in place to realise the vision and mission of the University. The two documents were adopted by the Quality Assurance Committee and approved by Senate in 2019.
- 3. The Department also produced the University self-assessment report for the period 2017-2018. The Quality Assurance Committee approved the report and recommended that it be printed for circulation. However, resources required to print the document were not disbursed. In this vein the Department undertook to upload the report on the Quality Assurance Departmental webpage.
- 4. A review of the Quality Assurance Academic Audit Instrument and the Academic Support Departments Audit Instruments was done. To this end, 2019 audits were carried out using the improved instruments.
  - i. A survey was conducted to facilitate evaluation of the University service delivery by final year students. This culminated in the production of a report which was circulated to Quality Assurance Committee members.
  - ii. During the year under review, the Department embarked on the development of the Quality Assurance Management System with the assistance of the Computer Science Department. The concept note of the Corrective Action and Preventive Action (CAPA) was developed and two prototype demonstrations were carried out by the developers to appraise the department on the functionality of the system.

#### 15.6 Conclusion

The Department was poised to effectively execute its mandate of ensuring effective quality in the academic as well as the academic support departments at the institution. This will help the University to locate its position as a role player in higher education within Zimbabwe, the region and globally.

# 16 DEPARTMENT OF MARKETING AND DEVELOPMENT

#### 16.1 Preamble

The Department of Marketing and Development is mainly focused on institutional visibility and marketing activities like Career Fairs and Exhibitions. It also concerns itself with Fundraising. As the major fundraising arm of the University, the department normally requires a stable economic working environment. However, the 2019 economic situation was tough and so targets were hard to achieve.

#### 16.2 Departmental Key Result Areas (KRA)

No	Key Results Area (KRA)	Comment
1	Resource Mobilization	Raise funds for various BUSE activities & projects
2	Stakeholder Engagement	For student placements, graduate employment & resource mobilization
3	Institutional Visibility	Website, Exhibitions & Social Media Marketing
4	Marketing service to sister departments	Providing Marketing Advice to non - Marketing Departments engaging in Marketing activities i.e. Faculties & Registry

Table 43: Departmental Key Result Area

#### 16.2.1 KRA 1- Resource Mobilization

#### 16.2.2 Summary of Resource Mobilization Effort

Total Income ZW \$286, 034.00 against a target of ZWL 75, 000.00

No.	Event	No. of Cos.	Amount	Comments
1	Career Fair	35	\$5 900.00	The amount was used to sponsor the event, and procure promotional material for ZITF
2	Science and Mathematics Olympiad		\$3 000.00	The amount was pledged by Nash Paints to support the 1 <sup>st</sup> and 2 <sup>nd</sup> prizes for the 'O' level section winners Further engagements with various partners are underway
3	Golf Tournament		\$110 000.00	See report
4	Graduation Ceremony		\$60750.00 + US50.00 54 cases mineral water	See report
			5 x academic regalia sets	Paper 14/

		1 x laptop 100 chicks + feeds to maturity	
5	COVIDSET	US\$1 500.00	Donated by Liquid Telecoms for dinner Donated by First Mutual
	(ZW \$85 150)	200 branded	
		satchels 200 branded	Donate by Econet Wireless
		folders 1 000 mineral water	Donated by ZIB

Table 44:Summary of Fund raising Initiatives

## 16.2.3 Other Fundraising Initiatives

No.	Event	No. of Cos.	Amount	Comments
1	Gym Rebuilding		\$xxxx	A Gym Rebuilding Resource Mobilization tasked with raising funds for rebuilding the Gym has been formed.
2	National Sports Academy		\$xxxxx	5 local Banks were engaged for potential partnerships (CBZ, ZB, Ecobank, POSB & BancABC)

Table 45: Other Fundraising Initiatives

#### 16.3 KRA 2 - Stakeholder Engagements

#### 16.3.1 Summary of Stakeholder Engagements

ltem	Event	# of Stakeholders	Impact
1	<ul> <li>Exhibitions <ul> <li>ZITF</li> <li>Mazowe Valley Agric Show</li> <li>Zimbabwe Agric Show</li> <li>SIRDC Exhibition</li> <li>Chamtec Smart Agriculture Conference</li> <li>Freda Rebecca Wellness Day</li> </ul> </li> </ul>	+/- 2 000 25 post graduate students 45 Universities & Polytechnics	-Student placements -Fundraising -Collaborations -Enrolment
2	Career Visits <ul> <li>Mukumba High</li> <li>Budiriro Secondary</li> <li>SIRDC</li> <li>International Educational &amp; Career Expo</li> </ul>	+/- 400 +/-350 +/- 1 500 +/- 1 000	<ul> <li>University awareness</li> <li>Potential students</li> <li>scouting for students</li> </ul>
3	Career Fair	35 Companies attended	-Potential placements for industrial attachment and employment

4	Pre-Industrial Attachment Workshops	Part 2.2 students from all 5 Faculties	-Expectations whilst on industrial attachment
5	Alumni Chapter Meetings Envisaged participants from: Bulawayo & Harare; Masvingo; Manicaland; Midlands	- 145 attended	Alumni support Chapter meetings in bold (column 2) could not be held due to budgetary constraints

Table 46: Summary of Stakeholder Engagements

#### 16.4 Career Fair Report

#### 16.4.1 Introduction

The event was successfully held on Friday 29<sup>th</sup> March 2019 at the FSE Complex Graduation arena, starting at 0900 hours. The Guest of Honour was Mr Mungofa (Vice President - IPMZ Mashonaland Region). He presented a powerful speech on student grooming, career guidance and how to prepare for interviews and the job market

A total of 35 organizations participated at the Fair.

#### 16.5 Alumni Chapter Meeting Report

A meeting of the Bulawayo Chapter of the BUSE Alumni was held concurrently with ZITF 2019.

#### 16.6 Exhibitions

#### 16.6.1 ZITF 2019 Report

The University participated at the 2019 Zimbabwe International Trade Fair that was held in Bulawayo on 22-28 April 2019.

#### 16.6.2 Zimbabwe Agricultural Show

This was held in Harare on 26-31 August 2019. Apart from other gains that are similar to that of the ZITF, the institution managed to enrol 34 students on stand. Most of them assumed studies in the August 2019 semester.

## 16.7 Industrial Attachment Placements/Industrial Attachment Database Generation and Management

The department continued to handle industrial attachment related issues for all students. For the 2018-2019 industrial attachment season, the department managed

to update the requisite database for Faculties and Departments. It also continued to facilitate industrial attachment assessment visits for students on attachment.

## 16.7.1 Pre Industrial Attachment Orientation Workshops

The pre-industrial attachment orientation workshops for the 2019-2020 students were successfully held. The objectives of the pre - industrial attachment orientation were as follows;

- Career guidance, grooming and etiquette
- Expectations from industry and the university
- How to prepare for interview
- Timely registration for Part 3.1 (industrial attachment)

# **17 NATIONAL SPORTS ACADEMY**

## 17.1 Summary of Major Achievements, Performances and Highlights

The talentees participated in the following events and posted the following performances/achievements;

## 17.1.1 JM BUSHA Triangular Series 1<sup>st</sup> Leg (BULAWAYO).

The National Sports Academy was represented by 14 talentees and achieved the following:

- 9 Gold,
- 3 Silver and
- 2 Bronze.
- 3 Personal Best(PBs) postings

## 17.1.2 J.M. Busha Triangular Series 2<sup>nd</sup> Leg (Mutare).

The National Sports Academy was represented by 14 talentees. All the talentees qualified for the 3<sup>rd</sup> leg of the J.M Busha Triangular series held from 8-9 June 2019 at the National Sports Stadium

## 17.1.3 J. M Busha 3<sup>RD</sup> Leg Harare Edition

The National Sports Academy was represented by 14 talentees. The results were as follows- 10 Golds; 6 Silver; 2 Bronze

## 17.1.4 ZITF Four Minute Miler (BULAWAYO)

The National Sports Academy was represented by one talentee Nyasha Mutsetse who got a silver medal and received RTGS 500. The 4-minute mile event is one of the major highlights at the ZITF.

## 17.1.5 UZ Invitational (Harare) These Competitions were held on:

The National Sports Academy talentees got 21 medals distrusted as follows:

- 15 Gold,
- 4 Silver and
- 2 Bronze.
- 2 personal best posting
- 1 new national record in high jump. This was aired interviewed on ZTV.

## 17.1.6 ZUSA Games Bulawayo.

The National Sports Academy was represented by one talentee who got 2 medals-1 Gold, 400m and 1 Silver 200m and additionally 1 personal best posting

The student enrolled for Social Work and was doing well in his studies. He was selected to represent all Zimbabwe Universities in the 2019 World Student University Games (FISU) held from 3-14 July in Naples, Italy, where he did very well.

## 17.1.7 Inter District Competitions NASH (Nzvimbo)

The National Sports Academy students participated as part of the Bindura District team which got 44 medals out of which National Sports Academy talentees posted 33 medals distributed as follows:

- ➢ 22 Gold,
- ➢ 6 Silver and
- > 5 Bronze.

Following on this, 13 talentees were chosen to represent Mashonaland Central Province at the NASH competition.

## 17.1.8 National Association of Secondary Heads (NASH) - Gweru

In the provincial competitions in which our students participated as part of Mashonaland Central Province, the Province got 16 Gold medals, 5 silver and 5 Bronze medals, Mashonaland Central came second after Harare Province that had 17 Gold, 6 Silver and 11 Bronze. The first time that Mashonaland Central achieved such a great result. The National Sports Academy talentees who were part of the team posted 10 Gold medals and 2 silver medals and three qualified for the COSSASA Finals.

## 17.1.9 Botswana International (Gaborene)

- Zimbabwe was represented by one 4x100 relay team
- National Sports Academy had one talentee in the team Dickson Kapandura
- The team got a Gold medal and was ranked first in Africa and second in the World after Jamaica as it posted 38:95s the second fastest time in the world.
- They broke a 12 year old national record (39; 16) which was set in Algiers, Algeria at the 2007 All Africa Games.
- This swathe team qualifying for the INTERNATIONAL AMATEUR ATHLETICS FEDERATION (IAAF) whose qualifying time was 39:10. Botswana, the favourites came second with 39:01 s

## 17.1.10 Botswana International Invitational (Gaborene)

- Zimbabwe sent 16 athletes
- National Sports Academy sent 5 talentees who posted 1 Gold medal; 1 silver medal and two bronze medals.

## 17.1.11 Botswana National (Francistown)

- Zimbabwe was represented by 5 athletes,
- · National Sports Academy sent two athletes -
- They both posted 2 Golds in their respective events, the only medals from Zimbabwe.

## 17.1.12 Confederation of Schools Sports Association of Southern Africa (COSSASA) - Eswethini

- Zimbabwe got 44 medals and came 2<sup>nd</sup> after Namibia.
- The National Sports Academy contingent of three talentees in the team posted two medals- a gold and a silver.

## 17.1.13 World Relay Championships (JAPAN)

Zimbabwe sent one relay team of five athletes which had one National Sports Academy talentee. The Zim team was disqualified after a false start

## 17.1.14 Cote De Ivoire Africa Youth Championships

National Sports Academy representative in the Zimbabwe team got a bronze medal in triple jump.

## 17.1.15 Student World University Games

One of our talentees Leon Tafirenyika a 2.1 student in Peace and Governance participated in the 2019 World University Games- FISU held in Napoli, Italy. Leon participated in the 200 m race and qualified for the semi-finals after clocking 21: 42s.

## 17.1.16 Africa Games -Casablanca Morocco

Five talentees qualified to participate in the 2019 edition of the Africa Games held in Casablanca, Morocco from 19 to 31 August 2019. The five athletes were part of the 12 member Team Zimbabwe athletics team. Results were as follows:

- 4X100 Relay team came sixth with a time of after qualifying for the semi-finals and finals. One of our athletes Kapandura Dickson was part of the team. Two of the athletes picked up injuries during their training and failed to compete.
- Norman Mukwada finished 2<sup>nd</sup> in the 400m hurdles semifinals behind South Africa and qualified for both the semifinals and finals.
- Dickson Kapandura finished 5<sup>th</sup> in the 400m finals with a time of 48:32
- Dorothy Kavumbura finished 14<sup>th</sup> in the Triple Jump event. Dorothy is still a "Junior" who was competing with seniors for the first time.
- Nyasha Mutsetse finished 6<sup>th</sup> in the 800m event with a time of 1:55:66

 Tafirenyika Leon finished 6<sup>th</sup> also in his 400m event with a time of 47:43s.

## All in all, Team Zimbabwe got four (4) medals; one (1) silver and three (3) bronze.

The Academy is now focussing on qualifying for Tokyo 2020 Summer Olympics

## 17.2 Zimbabwe High Schools Individuals Chess Championships

This national event was held at Victoria High School in Masvingo from 11- 14 April 2019. Chipindura High School (Mashonaland Central) came 8<sup>th</sup> with four Gold medals which were all obtained by three Academy players and one Chipindura High School player. They were all representing Chipindura High School.

The four chess players qualified to represent Zimbabwe in the Africa Schools and Youth Championships to be held on a date and venue to be advised.

## 17.3 Zimbabwe Olympic Committee Sports Psychology Workshop

The Zimbabwe Olympic Committee in partnership with the Norwegian Olympic and Paralympic Committee and Confederation of Sports (NIF) held a national workshop on Sports Psychology and Performance for 25 national coaches drawn from National Federations, Universities the Soccer Premier League and from the sports delivery institutions.

## 17.4 Talentees Life Skills Workshop

A very successful and effective life skills workshop for the talentees was held on Friday, 13 September 2019 in the FSE Boardroom

## 17.5 Visit to the University of Botswana

This visit which was initiated by the AU Region Five Secretariat and facilitated by the Chair of the Board was undertaken from 14-15 March 2019. The Vice Chancellor, Professor Eddie Mwenje; Director of Works and Estates and the Director of the Academy represented the university.

## 17.6 AU Regional Camp and Scholarship Programme;

Some talentees were awarded scholarships to support them towards qualification to and participation at the 2020 Tokyo Olympics. They were to attend a regional camp scheduled for early April to end of April at the High Performance Center at the University of Pretoria.

## 17.7 Zimbabwe Olympic Committee Sports Administration Workshop

The Zimbabwe Olympic Committee in partnership with the Norwegian Olympic and Paralympic Committee of Sports (NIF) held a national workshop on Governance targeting athletes specifically those in senior positions and retired. The Director presented a paper on **Effective Leadership in Sports** 

#### 17.8 New Talentees

New talentees joined the Department as resident talentees at Chipindura High School during the second and third term. There are also some talentees based at schools in Harare, Chinhoyi, Chegutu, Marondera, Bulawayo and Rusape who were recruited during the year and were doing very well in their respective disciplines and events.

## 17.9 Gym

Through an unfortunate development the University gym caught fire on the night of Wednesday 26 June 2019. Equipment worth millions of dollars, which was being used by the talentees, university students, staff and members of the community, was lost in the fire.

## 17.10 Development of a National Sports System/Structure for Athletics.

The National Athletics Association of Zimbabwe (NAAZ) initiated the process of reviewing and enhancing the entire national athletics system with a view to ultimately ensure consistent world class performances by Zimbabwean athletes. To assist in this important process, and as a member or key stakeholder, the Sports Academy was invited to be part of the process and was represented by the Director at two workshops held in Harare (2<sup>nd</sup> and 3<sup>rd</sup> of November and 29/11/19 to 01/12/19).

## 17.11 Japanese Volunteers

Following the return to Japan of our three Japanese volunteers Yusuki Muroi and Kohei Yamamura, and Shintaro Football Athletics and Judo coaches respectively after two years attachment with the university, JICA approved our application for these volunteers to be replaced. The first volunteer **Mr Kiyoshiro Yamane (football)** arrived in the country and underwent a culture and language induction in Harare and various rural areas in Zimbabwe in December 2019. He will come to the university on January 6 2020. We are awaiting the other replacements to join us later in 2020.

# **18 DEPARTMENT OF WORKS AND ESTATES**

#### 18.1 Introduction

The Department of Works and Estates worked hard and continued to improve in 2019. Below is the report for the Works and Estate Department for the year.

#### 18.2 Achievements

#### 18.2.1 Capital Projects

The Business Operations area tracked seven major capital projects with a total budget of ZWL\$211,612,946.25.

#### 18.2.2 Main Access Road

The Department constructed a 1.618km road connecting the University new main Campus site to Mt Darwin Road at a budget cost of ZWL\$27,685,703.36. The project achieved 95% completion and was commissioned by His Excellency, the President of the Republic of Zimbabwe, Cde. E.D. Mnangagwa on 12 October 2019. The project included construction of a two-way tarmac road with a bridge, solar lighting and main entrance gate house. The gatehouse and street lighting works were still ongoing and were rolled over to 2020.

#### 18.2.3 School of Optometry

The Department refurbished and converted one of its properties in the up-market residential suburb of Shashi View, Bindura at a cost of ZWL\$2,607,414.00 into the School of Optometry. The project was completed at the end of September 2019. The project included refurbishing the residential building to provide space for three consultation rooms, one lecture room, two offices, and dispensary and reception room.

#### 18.2.4 Prefab Office and Canteen

The Department constructed a prefab office and canteen building at a cost of ZWL\$89,239.23 at the University new main Campus site which was commissioned by the Vice Chancellor on 3 April 2019. The building comprises eight offices and a staff canteen including ablutions and a car park. The building provided temporary relief to space requirements for office accommodation for the Faculty of Science Education and a decent eating space for staff and students.

#### 18.2.5 Proposed Innovation Hub

The Department commenced construction of the Innovation Hub on the 1<sup>st</sup> of November 2019 at a budget cost of ZWL\$28,272,938.89 at the new main Campus site. The project includes construction of a two storey brick under chromadek sheets building to accommodate laboratories and workshops. The project works had progressed to 25% by the close of business in December 2019 and was scheduled to be complete by 28 August 2020. The completion of the building would help the

institution to implement the vision and thrust of the government on innovation and industrialization.

## 18.2.6 Town Campus Library

The Department resumed work on the Town Campus building outstanding works with a budget cost of ZWL\$1,610,279.94. The foundations for the steel stair cases were completed in September 2019. However, due to continued price variations and the need to realign old contracts with the new procurement regulations, work was suspended and rolled over to 2020.

## 18.2.7 Proposed National Sports Academy Phase 1

The Department resumed works on the ZWL\$154,794,299.40 National Sports Academy Phase 1 construction in February. The project included construction of an international standard multipurpose stadium and six ball game courts, access roads, car parks and a water reservoir. However, due to funding constraints the project was suspended. The project received a major boost at the close of the year when the Government through the Ministry of Youth, Sport, Arts and Recreation signed a Memorandum of Understanding with the University and agreed to fund the project. It was therefore envisaged that work on the project would resume in 2020.

## 18.2.8 Faculty of Science Education Block 1

The Department intended to complete outstanding works with an estimated budget of ZWL\$26,436,290.26 on the Faculty of Science Education Block 1. Specialist subcontractors for the outstanding works resumed works in April. However, works were suspended due to contractual challenges emanating from the need to align with new procurement regulations and also price and currency changes. The works were rolled over to 2020.

#### 18.2.9 General Repair and Maintenance of Buildings, Vehicles and Equipment

The Department kept the physical assets safe and functioning with a base budget of ZWL\$625,000.00. The maintenance services unit was very active with minor repairs on buildings and equipment throughout the year.

#### 18.3 Provision of Transport Services

Generally, the Department managed to service most of the transport requisitions from the various departments during the year although it became very difficult in the last quarter. The depleted vehicle fleet severely affected service provision, particularly industrial attachment trips and the shuttle bus service which had to be out sourced to alleviate the pressure on the internal fleet.

#### 18.4 11Conclusion

In spite of the challenges the Department encountered, it managed to fulfil its functions and kept the University running. This could not have been achieved without dedication from its workers. The entire team continued to focus on customer service, student success, and improving performance and were very proud of what they achieved.