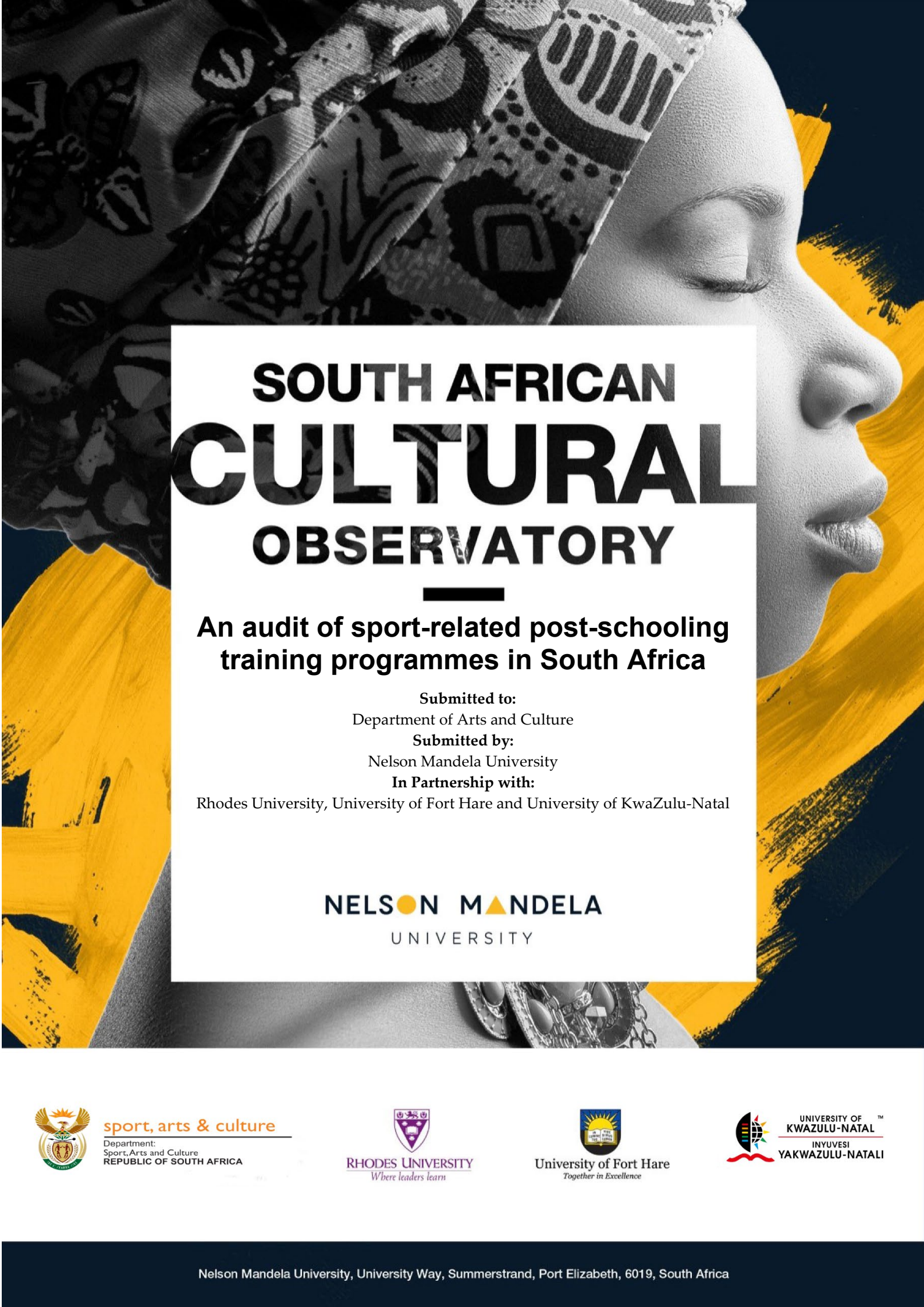




SOUTH AFRICAN CULTURAL OBSERVATORY

**An audit of sport-related post-schooling
training programmes in South Africa**

Submitted to:

Department of Arts and Culture

Submitted by:

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In Partnership with:

Rhodes University, University of Fort Hare and University of KwaZulu-Natal

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sport, arts & culture

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South African Cultural Observatory Report

An audit of sport-related post-schooling training programmes in South Africa

September 2021

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ABBREVIATIONS

BA:	Bachelor of Arts
BSc:	Bachelor of Science
CATHSSETA:	Culture, Arts, Tourism, Hospitality and Sport Sector Education and Training Authority
COVID-19:	Coronavirus Disease 2019
DHET:	Department of Higher Education and Training
GDP:	Gross Domestic Product
MSc:	Masters in Science
NQF:	National Qualifications Framework
PGCE:	Postgraduate Certificate in Education
PhD:	Doctor of Philosophy
SACO:	South African Cultural Observatory
SASCOC:	South African Sports Confederation and Olympics Committee
TVET:	Technical and Vocational Educational and Training
WIL:	work integrated learning

ABBREVIATIONS FOR UNIVERSITIES

CPUT:	Cape Peninsula University of Technology
CUT:	Central University of Technology
DUT:	Durban University of technology
MUT:	Mangosuthu University of Technology
NMU:	Nelson Mandela University
NWU:	North West University
RU:	Rhodes University
SMHU:	Sefako Makgatho Health Sciences University
SPU:	Sol Plaatje University
SUN:	Stellenbosch University
TUT:	Tshwane University of Technology
UCT:	University of Cape Town
UFH:	University of Fort-Hare
UFS:	University of Free State
UJ:	University of Johannesburg
UKZN:	University of KwaZulu-Natal
UL:	University of Limpopo
UMP:	University of Mpumalanga
UNISA:	University of South Africa
UNIVEN:	University of Venda
UNIZULU:	University of Zululand
UP:	University of Pretoria
UWC:	University of the Western Cape
VUT:	Vaal University of Technology
Wits:	University of the Witwatersrand
WSU:	Walter Sisulu University

Summary

The sports sector is a key contributor to the Gross Domestic Product (GDP) in South Africa, with the potential to contribute further economically and to promote social interactions and cohesion. For the sports sector to meet its full potential to address socio-economic challenges facing South Africa, it is important to understand the skills and training as well as the research landscape in the country. To ensure that training and research for the sports sector within the higher education sector is fit-for-purpose and responsive to the needs of the sports sector, understanding current training and research in higher education is an important first step to inform programme and curricula review and redesign. It is in this context that a landscape audit of training and research in the higher education sector (post-schooling focus) for the sports sector is undertaken. Given the current and potential of sports to contribute to socio-economic development, more needs to be done in terms of training and research in order for the sector to capitalise on existing opportunities and advancements to reach its full potential.

A desktop study approach was adopted to examine policy documents, research reports and academic sources. The key component of the research was a website audit of training qualifications/ programmes at all 26 public universities as well as selected TVET colleges (6) that examined sports-related qualifications and programmes (including modules and module content) in university and TVET College prospectus and handbooks sourced from the internet. There were no programmes and/ or information available on the TVET websites and for 8 of the universities on sports-related offerings. Additionally, a bibliometric scan of South African research in sport, leisure and recreation was conducted to identify output trends using SciVal.

The main themes emanating from the literature review are that current research on sports education focuses on skills and training in schools or relatedly training of physical sports educators at higher education institutions, including examining teaching and learning styles. Sport management is a key focus in the literature. Experiential and work integrated learning opportunities are also regarded as important. There is an increasing recognition of the importance of the sports sector to contribute to economic growth and job creation (especially given high levels of self-employability) as well as the need to focus training on career and business management skills as well as the development of personal skills and attributes. Graduate employability and skills development are also noted in the literature. An emerging theme is that of technology impacts. The limited published research that specifically looks at skills and training that focuses on the sports sector in the context of post-schooling qualifications/ programmes in South Africa reinforces the need for the landscape audit.

The audit reveals that there is a range of qualifications and modules offered, mostly linked to undergraduate and masters degrees. The limited number of certificate and diploma courses on offer are of concern, since these types of qualifications are important to address the professional and technical training needs of the sports sector. There was substantial differentiation among universities in relation to the number of qualifications, ranging from 1 to 20. There was a strong correlation between the number of degrees and the number of modules on offer. The levels of the modules on offer ranged from NQF4 to NQF10 (from certificate to doctoral level). The main themes covered in the modules are sport management, development and administration; coaching; sport participation; exercise science; marketing and business considerations; performance management; physical education; leisure and recreation; health and medical aspects; sport injuries; and anatomy and physiology. Additionally, broader

aspects in relation to aspects such as professionalism, community engagement, human resource management, communication and business administration are covered. Very few programmes required WIL or internship exposure. Most of the Masters and doctoral programmes are by research. There are very few instances of research training at undergraduate levels.

The SciVal analysis revealed that the number of scholarly outputs in relation to sport, leisure and recreation have been steadily increasing in South Africa. However, of concern, is that despite the increase in the number of publications, the citation count has declined. This could be indicative of broader concerns in South Africa about academics/ researchers focusing on quantity rather than the quality of the research outputs. The country is doing well in related to the most cited research in the world and the top publishing journals, many of which are international. Academic research on sport, leisure and recreation traverse diverse subject areas, with the main areas being Medicine and Social Sciences. Sports science/ studies should be a disciplinary field. International and national collaboration characterises research in sport, leisure and recreation in South Africa.

Inadequate sports-related training and skills development in South Africa will undermine efforts to unlock the economic potential of this sector, and contribute to social cohesion and wellbeing. In terms of research, while the increase in the number of scholarly outputs is increasing, the decline in citations suggest that there is a need to shift from the quantity of research generated to assessing the quality of the research that should impact on policy and programme development, curricula development and revision, value to practitioners and professionals in the sports sector, driving innovation and technology development, and informing future research in the field. Future research should assess the number of students enrolled in programmes and whether the tertiary education sector (including TVET colleges and private institutions) is meeting the needs of the sports sector. The lack of research training and WIL integrated learning should also be addressed. In this regard, it is recommended that higher education institutions engage with sports sector stakeholders to develop opportunities for work integrated learning/ internships and to be responsive to the changing needs and demands of a highly variable sports sector.

1. Introduction

Sports (sport is used interchangeably in the literature and this paper) is a key contributor to the Gross Domestic Product (GDP) in South Africa, with an increasing focus on sports entrepreneurship and business (Ratten, 2018), which has the potential to further increase contribution to economic growth, job creation and poverty reduction. Importantly, this sector promotes social interactions and cohesion. The sector also has elements of specialised skills and training to meet changing needs and demands. Skills and training also need to be responsive to external drivers such as globalisation, advances in technology development in the context of the 4th Industrial Revolution and increasing disruptions. The Coronavirus Disease 2019 (COVID-19) pandemic, in particular, has been an unprecedented disruptor with significant impacts on all economic sectors, including sports (South African Cultural Observatory - SACO, 2020). The COVID-19 pandemic poses several challenges for sports, which have exposed the vulnerabilities that exist, as well as the lack of capabilities to adapt to changes and be resilient. From a skills development and training perspective, even before the COVID-19 pandemic, there were concerns about the fit-for-purpose and relevance of training qualifications and programmes in the South African context (Asmal et al., 2021; De Lannoy et al., 2020; Isaacs, 2020; Oxford Analytica, 2017; Teane, 2020). This is especially relevant to align to the National Development Plan aspirations to address the key socio-economic challenges facing the country (including job creation), skills gaps, whether key areas of training are sufficiently covered, and the employability of graduates as indicated by Van der Berg et al. (2020). Given the current and potential of sports to contribute to socio-economic development, more needs to be done in terms of training and research in order for the sector to capitalise on existing opportunities and advancements to reach its full potential.

The disruptions associated with the COVID-19 pandemic, whilst devastating, provides an ideal opportunity to rethink training and skills development, especially with most higher education institutions radically looking at their offerings. Sports, like many other sectors, are also assessing how the pandemic has irrevocably changed supply and demand-side dynamics, and how to re-evaluate current business models and rethink strategies to enhance competitiveness and be more resilient to deal with future disruptions. Thus, the current contexts provide an ideal opportunity to catalyse critically examining training qualifications/programmes that can assist the sectors to be more robust and resilient, and that can be better positioned to take advantage of new opportunities. Thus, it is timely to re-examine the higher education sector in relation to practices, training and evidence-based research to respond to the needs and demands of the sports sector. The expansion of these sectors require changes in programme structures and curricular offerings (including course content) as well as key competencies.

A key focus of this commissioned research is to contribute to provide accurate and reliable data on the sports programme qualifications mix to:

- Inform the development of appropriate graduates to meet the needs and demands of the sports sector
- Identify and develop practical skills and training for current and future programmes
- Examine work integrated learning (WIL)/ internship opportunities to align to on-the-job training and student exposure to career opportunities in the sports sector

- Assess the preparedness of the higher education sector in South Africa to enable the effective development of sports skills

It is in this context that the commissioned study is located with the following overall goals:

- Critically examine current scholarly literature on post-schooling training and capacity development in the sports sector.
- Undertake an audit of current post-schooling (at universities and selected Technical and Vocational Educational and Training - TVET - colleges) sports-related programme offerings in relation to:
 - Institutions providing the training
 - Names of qualifications/ programmes and modules (including levels) offered
 - Disciplines/ departments qualifications/ programmes are offered in
 - Content and thematic/ focus area
 - WIL and internship exposure are evident
 - If research training is offered
- Undertake a South African sports research bibliometric scan, specifically a SciVal research assessment, to understand the sports research landscape in the country.
- Identify challenges and gaps in post-schooling training and research in the sports sector that need to be addressed.
- Forward recommendations to improve post-schooling training and capacity development in the sports sector.

In terms of the methodological approach adopted, a desktop study was primarily used to examine policy documents, research reports and academic sources. Furthermore, a website audit of training qualifications/ programmes at all 26 public universities as well as selected TVET colleges was undertaken (information extracted is in the attached excel spreadsheet). The focus was on examining sports-related qualifications and programmes (including modules and module content) in university and TVET College prospectus and handbooks sourced from the internet. Additionally, a bibliometric scan of South African research in sports was conducted to identify key areas of research. SciVal is a research performance assessment tool, drawing on the Scopus database which covers over 60 million publications from 1996, with weekly updates. Scopus is regarded as the most comprehensive multi-disciplinary bibliographic abstract and citation academic database of peer-reviewed literature. Therefore, SciVal is often used in research evaluation studies. The topics/ areas developed to inform the analysis were sport, leisure and recreation.

2. Literature overview

South African post-schooling/ tertiary education faces numerous challenges including relevance and purpose in relation to meeting economic and societal demands (Swartz et al., 2019). The current research on sports education focuses on skills and training in schools (for example, Di Palma et al., 2019; Sozen, 2012) or relatedly training of physical sports educators at higher education institutions (for example, Goudas and Giannoudis, 2008; Iryna et al., 2018; Knijnik et al., 2019). The research that focuses on sports in higher education sectors focus on a range of themes, including disciplinary focus areas, how training takes place (including learning styles of students) and graduate careers. In relation to disciplinary foci, an illustrative

study is that by Andryushchenko et al. (2016) in Russia. They found that the main discipline was physical education and sports, with the teaching and learning styles being largely lectures and presentations. This is not likely to be the norm now given the impacts of the COVID-19 pandemic.

Minten and Forsyth (2014) examine the careers of sports graduates, specifically focusing on the implications for the development of sports students' employability. They concluded that sports students should be provided with career management skills. They also highlight that a key economic benefit of higher education is that the sector is able to provide employable, 'work ready' graduates for other sectors, including the sports industry. Miragaia and Soares (2017) also note that the sports sector has high potential for self-employability, thus enabling job creation rather than job seeking which is much needed. This is relevant in South Africa as well. Minten and Forsyth (2014) also note that a key concern is the high number of sports graduates who do not gain employment within the industry. This is likely to be of concern in the South African context where 9.3% of university graduates nationally were unemployed during the first quarter of 2021 (Ndaba, 2021), and even more are likely employed in professions that are not linked to their qualifications.

Several studies focus on teaching and learning styles such as exploring reflective practise when training sports coaches (Knowles et al., 2001), examining preferred learning styles among students (Peters, 2008), social media as a learning tool (Stoicescu and Stănescu, 2018) and using problem-based learning strategies (Liu and Lipowski, 2021). Miragaia and Soares (2017: 113) state that several studies show that "critical thinking and civic engagement, combined with field experience, can help students strengthen their competencies and skills toward making better decisions in sports contexts, as well as prepare them for employability and adaptability in the competitive market". They particularly underscore the importance of experiential learning, service learning and internships as curricular activities that provide students with formative experience, exposing them to real labour market under university supervision, as well as stimulate the development of personal skills and attributes, including communication, cooperation, leadership, respect, confidence and critical reflection. The importance of work-integrated learning experiences through identifying graduate competencies for employability was also noted by Fleming et al. (2009).

Sport management training in higher education is also a key area identified in the literature, which is also focused on in South Africa as discussed later. Miragaia and Soares (2017) undertake an analysis of research outputs in relation to this topic. The content analysis indicates that higher education institutions published articles in relation to the following themes: curriculum and knowledge; internship, experiential learning and service learning; employability; pedagogy; gender; technology and e-learning; globalisation and internalisation; and accreditation process and quality. These are all aspects relevant to the South African context as well. Miragaia and Soares (2017) conclude that sport management should be an autonomous discipline. More generally, they also assert that the quality of sport management programmes and courses are of concern, which is linked to employability issues as well.

A Google Scholar search indicates that there is no published research that specifically looks at skills and training for sports in the context of post-schooling qualifications/ programmes. There is some research that focuses on education and skills in relation to tourism, which includes aspects pertaining to sports tourism (for example, Du Preez, 2017; Zwane et al.,

2017). Du Preez (2017) focused on formulating a skills development framework for sports tourism in South Africa. Du Preez (2017) found that there is an apparent gap in the availability of higher level graduates in sport and tourism, and that there were no dedicated sport tourism management degrees, diplomas or certificates in South Africa. Du Preez (2017) also highlights the importance of internship opportunities in the sector to expose students to working in the sports sector. In terms of training, the need to focus on volunteers was also indicated. The Culture, Arts, Tourism, Hospitality and Sport Sector Education and Training Authority (CATHSSETA, 2013) indicates that a skills audit undertaken in 2010 by the South African Sports Confederation and Olympics Committee (SASCOC) found that there was an urgent need for volunteer training directed at coaches, umpires and sports officials in South Africa. Du Preez (2017) raises a key consideration that skills development for the sports industry requires the higher education sector to engage with government, the private sector and sports federations with a shift away from focusing mostly on physical education and the fitness industry to preparing students for a broader range of career opportunities in the sports sector.

Jones and Brooks (2008) indicate that desired aspects of a sports management curriculum are:

- foundational areas of study comprising full courses in business management, marketing, economics, accounting, finance and computer science;
- application areas of study comprising of sport foundations (for example, sport sociology, sport psychology, sport philosophy, women in sports), sport law, sport economics, sport marketing/ promotion and sport administration; and
- field experiences including practical and internship opportunities.

The competencies identified by Du Preez (2017) include willingness to learn, initiative, communication and teamwork skills, management and business skills, personal organisational skills, facility management and officiating. Furthermore, specific skills areas identified by stakeholders interviewed by Du Preez (2017) were stadium management, destination marketing, and sponsorship, as well as broadening the focus on more sporting codes (tendency to focus mainly on rugby, soccer and cricket). The range of skills that need to be covered, exposure to the workplace and the multidisciplinary orientation identified are relevant for sports training more generally as well. Burnett (2010) indicates that South Africa experiences a lack of graduate students who were focusing on sport event management, indicating that very few institutions offered such programmes at degree levels.

Physical education training in respect of teacher training (Stroebe et al., 2017; 2019; Vosloo, 2014) is also a main focus of the existing scholarly research in South Africa. Steyn et al. (2012; 2014) focus on sport event management competencies and curricula outcomes in South Africa, highlighting differences between the industry's needs (expected competencies of sport event managers in practice) and the modular outcomes of sport event management at higher education institutions. Steyn et al. (2012) examine the state of the competencies regarding sport event management in South Africa in relation to general management, office administration (including computer literacy), marketing management, human resource management, facility operations/ management, financial management and legal aspects of sport events. Steyn et al. (2014) assert that a gap exists between the current event management curricula outcomes at higher education institutions in South Africa and the expected competencies of sport event managers in practice. South Africa's education often reveals numerous problems directly related to curricula, including concern over the lack of a

relevant knowledge base as well as pertinent training programmes to prepare sport managers for the contemporary sport events industry. To meet the skills needs of the economy, Steyn et al. (2014) state that the quality of both education and the workforce will have to improve.

Reddy et al. (2018) identify the sports sector as occupations in high demand in South Africa, which resonates with earlier assertions that the sports sector is well positioned to contribute to economic development and job creation. In relation to skills development and training for the sports sector, the following need to be looked at (Walker, 2018):

- Training and capacity development initiatives in relation to the number of persons accessing and benefitting from training programmes
- Training received in relation to curricula, including the content covered and levels of qualifications in the post-schooling sector
- Assessing the competencies of lecturers/ trainers and researchers, in relation to whether they are sufficiently qualified and knowledgeable
- Being responsive to both the challenges and opportunities associated with technological advancements in the specific sectors.
- Ensuring that training meets the diverse skills needs of the different components of the sectors.

The costs associated with training, especially in the sports sector where specialised equipment and facilities are generally needed, also need to be considered.

Opportunities for online and hybrid (a combination of online and physical contact) learning have increased substantially as a response to deal with the COVID-19 pandemic impacts on education and training. This presents new opportunities for skills development and training for the sports sector, especially given the nature of skills required. Online learning also permits flexibility and reduces costs. However, attention should be paid to the challenges associated with online learning in the South African context, where access (associated with costs and the quality of internet connectivity in many parts of the country, especially in poorer areas) remains a key issue.

3. Review and analysis of website audit of sports-related qualifications/ programmes

It is important to note that TVET Colleges selected did not have sports programmes. This does not mean that TVET Colleges are not involved in sports related training. Many do not have their prospectus or handbooks on their websites to include in this audit. The abbreviations for the universities that were subjected to the audit are indicated separately after the rest of the abbreviations. The information extracted has been compiled in the excel spreadsheet attached. In some instances modules descriptors/ content are not easily available. Additionally, information could not be sourced for CUT, RU, SMHU, TUT, UL, UMP, UNISA and VUT.

Qualifications, programmes and content audit

The Table below summarises the number of qualifications and modules in different categories for the universities where information was sourced. Table 1 in Appendix 1 presents the qualifications per institution together with the themes/ areas covered within the modules offerings. The Table shows that in relations to qualifications, the following totals were evident:

- 9 Certificates (C)
- 11 Diplomas (D)
- 36 Undergraduate degrees (UD)
- 13 Honours (H)
- 18 Masters degrees (M)
- 5 Doctor of Philosophy (PhD)/ doctoral degrees

The highest numbers were in relation to undergraduate degrees (36) followed by Masters degrees (18). There are substantial differences in relation to the number of qualifications that were linked to sport degrees or had sport content, ranging from 1 qualification in SPU and WSU to 20 in UJ. Four institutions offered sport related doctoral degrees: NWU, UT, UKZN and UNIZULU. It is important to note that several of the qualifications (see Table 1 in Appendix 1) had sport-related content in other qualifications, generally in education and health science degrees. In relation to the number of modules associated with the qualifications per institution, among those where module information was available, there was a strong correlation between the number of degrees and the number of modules on offer. UJ had the most modules (more than 90) followed by NWU (more than 70). Among the rest, modules were less than 50, ranging from 1 to more than 40.

Table 1: Number of qualifications and programmes (and modules) per institution

Institution	Number of qualifications/ programmes						Number of Modules
	C	D	UD	H	M	PhD	
CPUT		3					Could not determine
DUT	1		1				> 40
NWU		2	3	2	3	2	> 70
SPU			1				1
SUN	1		2	1			> 10
UCT		1	1	1	4		> 20
UFH			2	1	1		> 35
UFS			3	1			10
UJ	3	2	9	2	3	1	> 90
UKZN	1		2	3	2	1	> 20
UNIVEN	2	1	4				> 40
UNIZULU		1	3	1	3	1	> 30
UP	1		1				> 15
UWC		1	2	1	1		> 30
Wits			1		1		4
WSU			1				1

The levels of the modules on offer ranged from National Qualifications Framework (NQF)4 to NQF10 (from certificate to doctoral level). Additionally, qualifications were usually in the following faculties/ schools/ departments: Sport Science, Studies, Health Sciences, Community and Health Sciences, Science, Applied Science, Biological Sciences, Business and Management Sciences/ Economic and Management Studies and Education.

Table 1 in Appendix 1 provides a summary of the names of qualifications and key themes/ content per institution, derived from the spreadsheet. There are overlaps in content covered across the institutions, which include:

- Sport management
- Sport development
- Sport administration
- Sport marketing/ commercialisation
- Sport participation
- Exercise science
- Coaching
- Fitness and wellness
- Performance enhancement/ management
- Exercise
- Recreation
- Anatomy and physiology
- Sport injuries
- School sports/ physical education
- Nutrition
- Lifestyle
- Sport therapy/ rehabilitation

Universities also included physical activity and sports in schools as modules on offer in education programmes. Additionally, sport psychology, sport sociology, sport anthropology and sport history featured in some of the programmes.

Notably, there are specific institutions that are focusing on specialised training which relate to the following aspects:

- Biokinetics
- Kinesiology
- Biomechanics
- Sports physiotherapy
- Sport doping
- Sport governance
- Talent management
- Sport sponsorship
- Venues and facilities management
- Sports events management
- Persons with disabilities and sport
- Exercise testing and sport assessments/ evaluation
- Sports vision

An interesting observation is that some programmes are including issues that are broader and not directly linked to sports-related technical skills, including:

- Human resource management
- Communication
- Business administration
- Entrepreneurship
- Leadership
- Community engagement
- Law
- Financial management
- Professionalism
- Sport and politics

This indicates the sports students are being exposed to a range of broader skills. Particularly the importance of business and entrepreneurial skills have been noted in the literature.

The audit reveals that there are a range of sports-related qualifications on offer and content covered in South Africa by tertiary institutions. These are areas of skills training identified in the literature that are important to integrate in training programmes to fully unlock the potential of the sports sector. This study, however, did not include an examination of the number of students enrolled per qualification, which is important to understand demand for these qualifications. Including tracer studies to examine where graduates are employed will also assist to understand whether universities are equipping students for jobs in the jobs sector and/ or responding to sector needs.

WIL/ internship exposure

Very few programmes required WIL or internship exposure. Those that did were:

- UWC: the Bachelor of Science in Sport and Exercise Science has a Recreation Major Internship. Students work in a recreation service setting developing skills and knowledge around the administration and operations of the setting. The Bachelor of Arts in Sport, Recreation and Exercise Science has a Coaching Internship. The focus is on planning training programmes.
- UKZN: a 1 year internship programme in the Bachelor of Sports Science Honours (Exercise Science) is linked to the Research Methods and Statistics module. Additionally, a 1 year internship programme in the Bachelor of Sports Science Honours (Leisure Sciences) is linked to the Leisure Management module.
- UNIZILU: the Bachelor of Science (BSc)/ Bachelor of Arts (BA) Honours (Human Movement Science/ Biokinetics/ Adapted Physical Activity) has a Professional Internship module, with 80% external practical examination in a biokineticist or kinderkineticist setting.

WIL/ internship programmes expose students to work experience and practical skills which are important for the skills sector. The limited exposure (only 3 universities had WIL requirements) needs to be addressed.

Integration of research skills training

Table 1 indicates that few universities (10 in total) offer Honours, Masters and/ or doctoral programmes. Most of the Masters and doctoral programmes are by research. The prospectus/ handbooks do not indicate the extent and nature of research training that are associated with these qualifications. It is most likely that the supervisor model is used whereby students work almost exclusively on their research projects with their supervisors on specific topics with limited opportunities for formal research training.

In some cases, research training at undergraduate levels were noted:

- DUT: the Bachelor of Sport Science and Management has a Sports Research Techniques module
- SUN: the BSc Honours in Sport Science (Performance Sport) has a Statistics for Sport Science and Exercise Science module
- UKZN: the Bachelor of Sport Science has an Evaluation, Statistics and Measurement of Sport Science module and the Bachelor of Sports Science Honours (Exercise Science) has Research Methods and Statistics as well as Laboratory Techniques in Sport Science and Exercise Physiology modules.
- NWU: the Bachelor of Health Sciences with Sport Coaching and Human Movement Sciences has Laboratory Practice for Sport Science modules.
- UNIVEN: the Advanced diploma in Sports management has the Sport Research Project (Experiential Training) module.
- UFH: the Bachelor of Health in Human Movement Science has the Research Methods in Sport Physical Activity module and the Bachelor of Science in Human Movement Science has Research Methods in Physical Activity module.

Research is critically important to generate knowledge in a particular field and to ensure that research skills are imparted. To better understand the sports research landscape, this study included a bibliometric analysis discussed next.

4. Scopus analysis of sports-related research

Noting that there are strong associations between sport, leisure and recreation (as evident in the literature as well as module themes presented in the previous section), a unique topic was created in SciVal using these three terms to undertake the bibliometric analysis. The search using this topic combination revealed that 223 942 academic outputs were published in relation to this topic from 2011 to 2020 (Figure 1). Importantly, the number of scholarly outputs have been steadily increasing. This trend continues in 2020 despite the COVID-19 pandemic disruptions. This also could be indicative of research in relation to COVID-19 impacts on the sports sector.

Figure 1: Scholarly Output

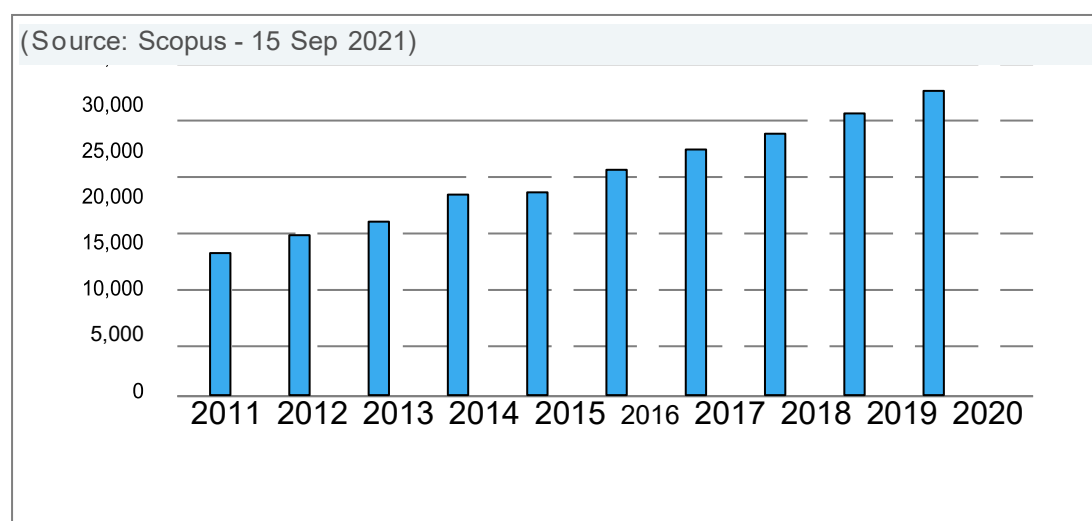
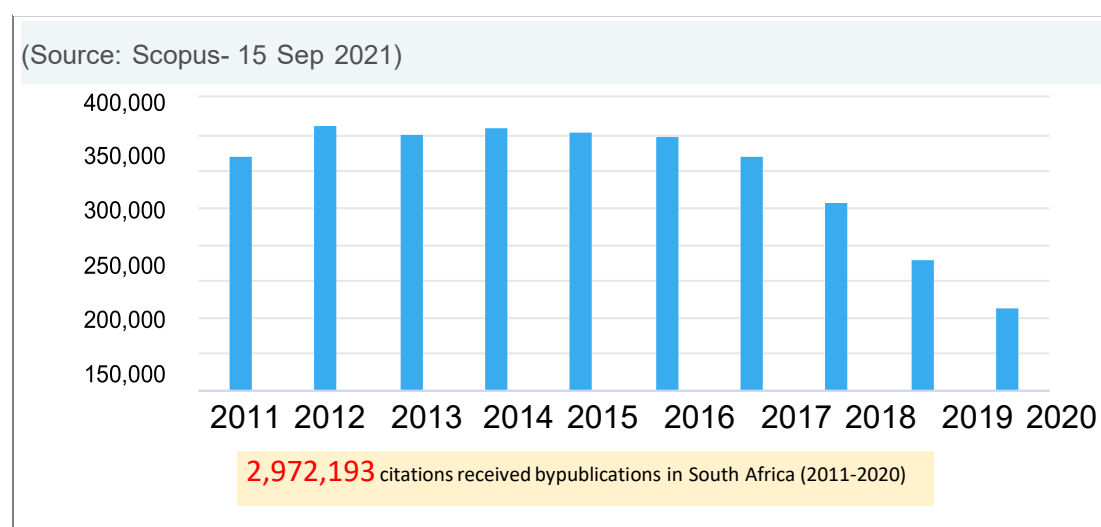


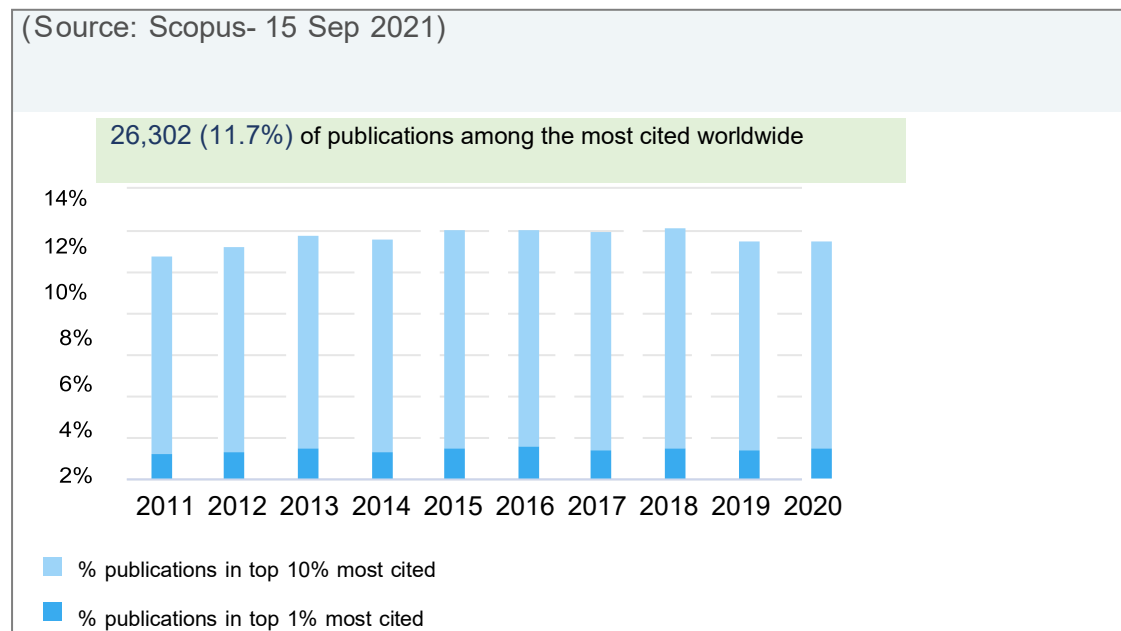
Figure 2 indicates the citation count (that is, the number of times a scholarly output was referenced in another peer reviewed publication) in the field sport, leisure and recreation. In total, scholarly outputs were cited 2 972 193 times from 2011-2020. The decline from 2016 onwards is of concern in the context of the steady increase in the number of scholarly outputs presented in Figure 1. This could be indicative of broader concerns in South Africa about academics/ researchers focusing on quantity rather than the quality of the research outputs.

Figure 2: Citation Count for 2011 to 2020



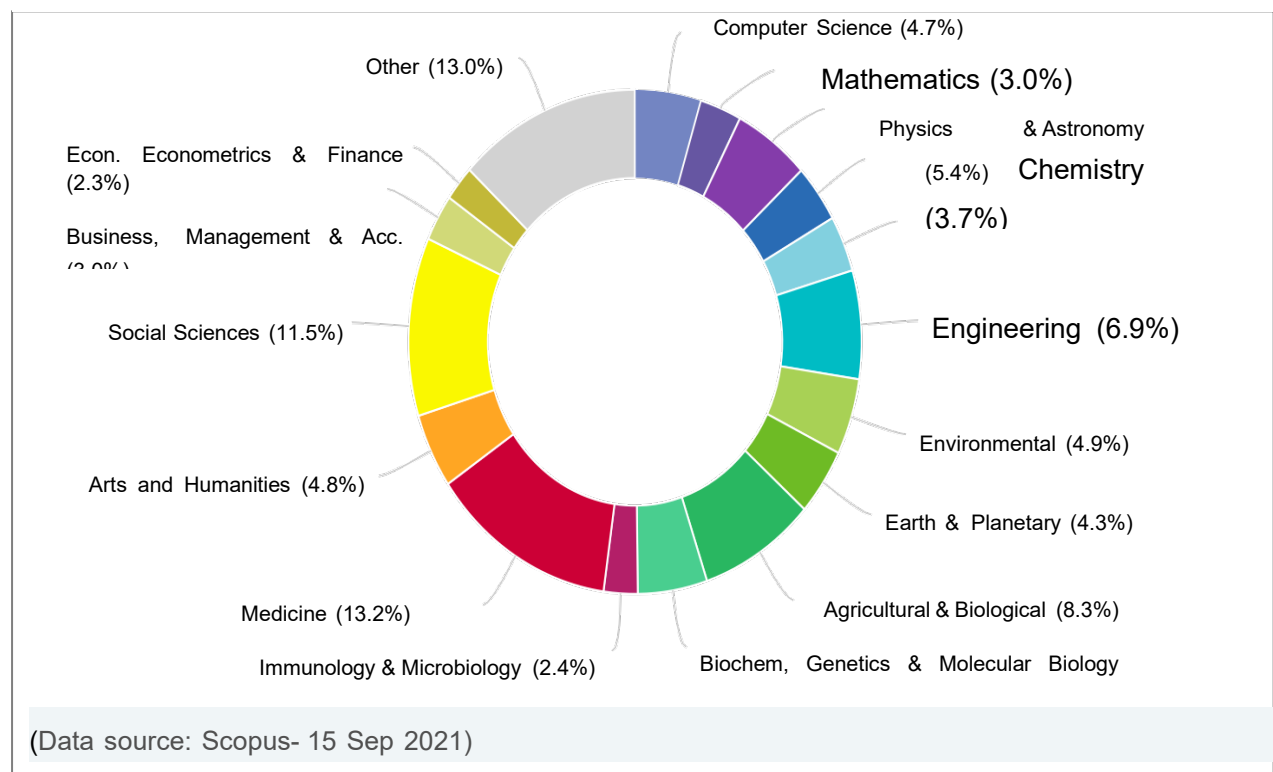
Further disaggregation revealed that whilst citations have been decreasing since 2017, South Africa academic research on sport, leisure and recreation are still in the upper quintile of most cited research in the world (Figure 3). More specifically, 11.7% of publications appear in the top 10% of most cited publications worldwide.

Figure 3: Outputs in Top 10% Citation Percentiles (field-weighted) from 2011 to 2020



Evidently, academic research on sport, leisure and recreation traverse diverse subject areas as shown in Figure 4. The main areas are Medicine and Social Sciences. These distributions do suggest that in relation to sport-related research in South Africa, fields such as management, administration and finance may be underrepresented. Unsurprisingly, these subject areas are similar to the themes linked to the modules presented earlier. Of concern is that SciVal does not view sports research as a specific disciplinary field. While understandable given the multidisciplinary nature of sports education and research, it makes it difficult to examine trends in scholarly outputs. It is interesting to note, however, that key disciplines that were prominent in the module thematic analysis undertaken in South African universities do not feature as research subject areas. These include education and psychology subject areas.

Figure 4: Publications by Subject Area (2011 to 2020)



In terms of the sport, leisure and recreation scholarly outputs emanating from South Africa, close to half the research (47%) was with international collaborators (Figure 5). Additionally, 12.6% was with national (other South African) collaborators and 23.1% were with collaborators from the same institution. Only 17.3% were single authors with no collaboration. This indicates that research on sport, leisure and recreation is associated with collaboration. A more detailed examination of research based on collaboration reveals that research with international collaborators yielded higher overall citations, thereby denoting a higher scholarly impact.

Figure 5: Scholarly output and collaboration

(Source: Scopus- 15 Sep 2021)

Scholarly Metric		per Output	Citation Citations	Publication	Field Citations Weighted Impact
International collaboration	47.0%	105,256	2,209,131	21.0	1.86
Only national collaboration	12.6%	28,307	240,181	8.5	0.78
Only institutional collaboration	23.1%	51,658	365,715	7.1	0.70
No collaboration 17.3%		38,719	157,161	4.1	0.74

Figure 6 shows the journals with the highest number of articles in relation to sport, leisure and recreation South African outputs were published, which included South African and international journals. It is important to note that the Mediterranean Journal of Social Sciences (highest number of publications in 2014 is categorised by the Department of Higher Education and Training (DHET) in South Africa as a predatory journal that does not comply with what is deemed to be scholarly practices. This accounts for the drop in publishing in this journal (no publications from 2016 onwards) since DHET no longer recognises it. It is important to note that none of the journals in Figure 6 were identified as top publishing journals in Miragaia and Soares' (2017) bibliometric analysis of research topics and trends in higher education and sport management globally.

Figure 6: Scopus top Sources

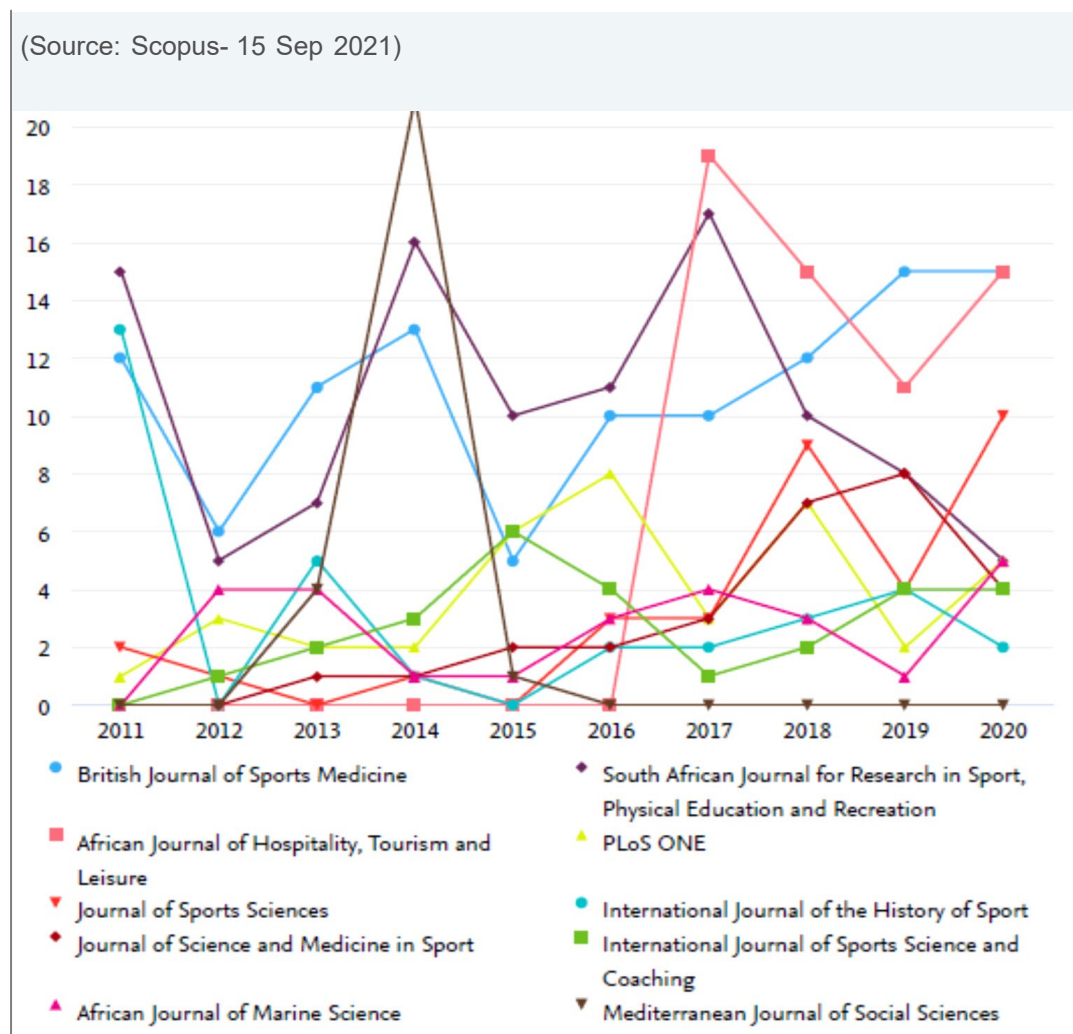


Figure 7 denotes the key phases in relation to sport, leisure and recreation. This is a useful tool to assess the main themes in the literature. The key phrase analysis reveals that football, running, athlete and player are among the most commonly used phrases in research focusing on sport, leisure and recreation. The phrases, in part, reflect the themes identified in relation to the modules on offer.

employability trends among graduates in sports related programmes would assist to better understand whether the post-schooling education sector is meeting the needs of the sports sector. While attempts were made to examine TVET Colleges, the lack of information on the internet requires that primary research should be undertaken to assess if TVET Colleges are providing sports-related qualifications. The number of private tertiary institutions are also increasing in South Africa and future research should include these institutions as well.

The analysis of sports-related themes/ aspect in the programmes and specific modules indicate that several areas are covered, including sport management, development and administration; coaching; sport participation; exercise science; marketing and business considerations; performance management; physical education; leisure and recreation; health and medical aspects; sport injuries; and anatomy and physiology. Additionally, broader aspects in relation to aspects such as professionalism, community engagement, human resource management, communication and business administration are covered. The limited number of certificate and diploma courses on offer are of concern. The universities need to develop more programmes that permit practitioners and professionals to access training that will enhance their skills. Professional training is an opportunity for both the sports and education sectors.

The next step is to examine whether existing programmes and skills covered adequately address the needs in the sports sector. Research focusing on the perceptions of the sport sector stakeholders in both the public and private sphere is needed to examine whether current offerings are adequate in providing the skills needed, gaps in relation to training, and whether graduates are well prepared for the workforce. The limited WIL and internship programmes should also be addressed, and include whether the sport sector stakeholders are willing to collaborate with tertiary institutions to support these types of programmes that will expose students to career opportunities in the sports sector as well as assist in developing practical skills. Adequate and relevant sport-related skills in South Africa will support efforts to unlock the economic potential of this sector. Additionally, the higher education sector needs to be responsive to the changing needs and demands of a highly variable sports sector.

Thus, in summary, key areas that need attention are:

- The sports and tertiary education sectors to work together to review programmes and curricula, including identifying areas where additional skills development and training are needed
- Since sports is an interdisciplinary field, identify opportunities to integrate sports-related training in other programmes and curricula, which is already being done in some areas such as education, business management and tourism
- More WIL and internship opportunities in both the private and public sectors
- Integrate research and business/ entrepreneurial training at all levels

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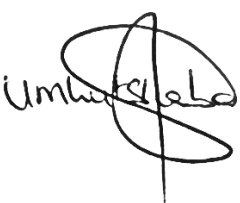
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APPROVALS FOR THE SOUTH AFRICAN CULTURAL OBSERVATORY – An audit of sport-related post-schooling training programmes in South Africa – September 2021

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APPENDIX 1:

Table 1: Names of qualifications and key themes/ content per institution

	Names of qualifications	Themes
CPUT	Diploma in Sport and Leisure Management National Diploma in Sports Management National Diploma in Sports Management (Extended)	Sports management, Recreation, Fitness, Wellness,
DUT	Higher Certificate: Sport Management Science Bachelor of Sport Science and Management	Sport management, Sport industry, Coaching, Personal training, Exercise and sports science, Sport business administration, Sport marketing, Business economics, Entrepreneurship, Sport governance, Sport participation, Sport and recreation, Recreation science, Communication skills, Leadership, Resource management, Human resource management, Education/ teaching physical activity, Anatomy and physiology, Exercise physiology, Physical conditioning, Athletic Injury management, Sport media communication, Communication skills, Event and facilities management, Applied sciences, Legal, Financial, Sport psychology, Sport anthropology, Community engagement, Equality and diversity, HIV and communicable diseases
NWU	Diploma in Coaching Diploma in Sport Management Bachelor of Health Sciences with Sport Coaching and Human Movement Sciences Bachelor of Health Sciences with Sport and Recreation Administration Bachelor of Education Bachelor of commerce in Management with Sport and Business Management Bachelor of Health Science Honours in Human Movement Science	Sport development, Sport management, Sport administration, Sport organisation, Life orientation, Physical education, Coaching (for specific codes of sport as well), Human movement, Games, Motor learning, Recreation, Recreational movement skills, Sport management, Exercise science, Talent identification and talent development, Sport law, Sport business management, Sport marketing, Sport commercialisation, Sport industry, Managing high performance sport, Sport nutrition, Sport injuries, Sport perceptual skills, Anatomy, Sport physiology, Ethics, Sport psychology, Sport vision, Sport injuries, Clinical exercise physiology, School sports, Sport mechanics, Nutrition

	Bachelor of Health Science Honours in Nutrition Master of Health Sciences in Human Movement Sciences Master of Health Sciences in Recreation Science Master of Science in Nutrition Doctor of Philosophy in Health Sciences with Human Movement Science Doctor of Philosophy in Health Sciences with Recreation Science	
SPU	Bachelor of Education	Life skills module include physical activities
SUN	Postgraduate Certificate in Education (PGCE) BSc Sport Science BA (Sport Science) BSc Honours in Sport Science (Performance Sport)	Sport science, Sport and exercise, Sport and recreation management, Coaching, Performance enhancement, Physical development and movement, Movement, Marketing, Strategic planning, Sport psychology, sport history, Sport for persons with disabilities
UCT	Postgraduate Diploma in Management in Sport Bachelor of Science in Medicine Bachelor of Medical Science (Honours) in Exercise Science Master of Philosophy in Sport and Exercise Medicine Master of Science in Exercise and Sports Physiotherapy Master of Science in Sports Injuries Master of Philosophy in Biokinetics	Sport management, Sport administration, Sport organisation, Fitness, Wellness, Games, Information technologies, Sport participation, Sport events, Sport nutrition, Performance enhancements, Sport business, Human biology, Exercise science, Physiology of exercise, Exercise medicine, Applied anatomy, Biomechanics, Sports physiotherapy, Physical activity and participation, Sport injuries, Treatment and rehabilitation of injuries, Sport psychology
UFH	Bachelor of Health in Human Movement Science Bachelor of Science in Human Movement Science	Sport management, Clinical Physiology, Exercise Science, Exercise physiology, Human movement, Sport performance, Sport injuries, Anatomy, Motor development, Motor control, Motor learning, Sport injuries, Nutrition, Coaching, Sports skills, Perceptual motor training, Sport physiology, Sport

	Bachelor of Health Sciences Honours in Human Movement Science Master of Health Science in Human Movement Science	psychology, Biomechanics, Movement science, Recreation
UFS	Bachelor of Sport Coaching B Sport Coaching and Development Bachelor of Biokinetics Bachelor of Science Honours in Forensic Sciences	Sport doping, Coaching, Administration, Physical training, Rehabilitation, Motor control, Exercise and sports science, Biokinetics, Physiology
UJ	Higher Certificate in Sport Administration Higher Certificate in Sport Coaching and Exercise Sciences Postgraduate Certificate in Further Education and Training Teaching Diploma in Sport Management Extended Diploma (Small Business Management) Bachelor of Health Sciences in Sport and Exercise Sciences Bachelor of Biokinetics Bachelor of Health Science in Podiatry Bachelor of Commerce in Sport Management Bachelor of Science in Life and Environmental Sciences in Physiology and Psychology Bachelor of Science in Life and Environmental Sciences in Sport Science Bachelor of Education in Foundation Phase Teaching Bachelor of Education in Intermediate Phase Teaching	Sport management, Sport practice, Exercise science, Exercise programming, Exercise physiology, Coaching, Athletic development, Kinesiology , Biomechanical, Leisure and sport, Entrepreneurship, Business, Sport consumer behaviour, Marketing communication, Sponsorships, Physical education, Motor learning, Sport activities in schools, Sport psychology, Sport administration, Sport practice, Sport didactics, Sport sociology, Sport psychology, Sport clubs, Facilities management, Event management, Coaching, Human resource administration, Financial management, Sport law, People with disability in sport, Sport leadership, Ethics, Injury prevention and management, Fitness and health, Leisure and recreation management, General Sport Patient Assessment, Gait and biomechanical assessment technique, Physiological testing and interpretation, Sport equipment, Sports traumatology, Sport education and training, Sport volunteers, Sport tourism, Marketing, Sports promotion, Financial management, Professionalism, Sport and development, Violence in sport, Law, Leadership, Human resource management, gender and age, Environmental influences, Sport and politics, Economy and sports, Sport vision,

	Bachelor of Education in Senior Phase and FET Teaching Bachelor of Commerce Honours in Sport Management Bachelor of Arts Honours in Sport Science Master of Philosophy in Biokinetics Master of Commerce in Sport Management Master of Philosophy in Sport Management Doctor Philosophy in Health Sciences: Biokinetics	
UKZN	Postgraduate certificate in Education Bachelor of Sport Science Bachelor of Education Bachelor of Education Honours (BEdHons) Bachelor of Sports Science Honours (Exercise Science) Bachelor of Sports Science Honours (Leisure Sciences) Master of Sport Science Master of Laws in Business Law Doctor of Philosophy in Sport Science	History and management of sport science, Recreation, Exercise science, Exercise physiology, Biokinetics, Kinesiology and Anatomy, Biomechanical principles of sport science, Sport performance, Sport injuries, Sport psychology, Functional anatomy, Exercise testing, Exercise physiology, Health promotion, Sport performance, Adapted physical activity, Leisure management, Leisure services, Community recreation programmes, Sport science for educators, Movement education, Active citizenry, Ethics, Biomechanical aspects, Sports law, Human rights, Sport and gambling, Corruption, Sport governance
UNIVEN	Certificate in Sports coaching Certificate in Sports management Advanced diploma in Sports management Bachelor of Science in Biokinetics Bachelor of Science in Recreation and Leisure studies	Sport management, Biokinetics, Sports education, Coaching, Sports skills, Physical performance, Physical conditioning, Health, Lifestyle, Exercise and physical activity for diverse (special) population, Motor learning, Cardio and exercise, Performance, Exercise physiology, Exercise assessment and evaluation techniques, Sports medicine, Sport injuries, Clinical exercise, Sport psychology, Sport skills, Recreation and leisure, Nutrition, Sport first aid, Sports skills, Games, Kinanthropometry in sports and exercise, Leadership, Sports conflict, Conflict

	Bachelor of Science in Exercise and Sports science Bachelor of Education: Further Education and Training	resolutions, Sport marketing, Sport sponsorship and fundraising, Sports organisations, Sport law, Sports competitions, Human resource management, Sports facilities and equipment management
UNIZULU	Diploma in Sport and Exercise Technology Bachelor of Education: Intermediate and Senior (EMS and Life Orientation) Bachelor of Science Bachelor of Education: Intermediate and Senior – Life Orientation and Language BSc/BA (Hons) (Human Movement Science / Biokinetics / Adapted Physical Activity) Master of Education in Education Psychology Masters in Science (MSc) (Human Movement Science) (Sport Science/ Biokinetics/ Kinderkindetics) PhD (Human Movement Science) (Sport Science/ Biokinetics/ Kinderkinetics)	Sport and exercise, Exercise science, Technology, Physical activity, Fitness, Lifestyle, Wellness, Sport coaching, Sport instructor, Sport management, Functional anatomy, Physical education, Recreation, Human movement, Physiology, Kinesiology, Biokinetics, Biomechanics, Ethics, Fitness, Gym training, Sport psychology, Sports and community psychology, Sport performance, Health, Lifestyle, Life Orientation: Physical and motor development, Adapted Physical Education, Exercise testing, Aetiology of sports injuries, Performance, Motor learning, Measurement and evaluation, Management of diseases
UP	Higher Certificate in Sports Sciences BEd Intermediate Phase Teaching	Human movement, Sport management, Recreation and sports management, Exercise and training principles, Exercise science, Coaching, Professionalism, Swimming and lifesaving, Games, Specific sport codes, Sport injuries, Dance, Physical education, Recreation, Physical fitness, Life orientation
UWC	Postgraduate Diploma in Sport, Development and Peace Bachelor of Science in Sport and Exercise Science Bachelor of Arts in Sport, Recreation and Exercise Science Bachelor of Arts Honours in Sport and Recreation Management Master of Arts in Sport, Recreation and Exercise Science	Sport management, Sports industry, Sports organisations, Facilities management, Marketing, Fitness, Physical fitness testing and administration, Sport technology, Recreation and leisure, Therapeutic recreation, Leadership, Sport recreation exercise, Lifestyle management, Motivation of participants, Therapeutic recreation, Wellness through physical activity, Management, Human resource management, Information management, Strategic planning, Ethics, Sports injuries, Sport safety, Coaching, Event organisation, Health appraisal, Risk assessment Administration, Dance, Water

		skills, Outdoor activities, Games, History of sport (focus in South Africa), Sport diversity (race, gender, ethnicity), Gender in sport, HIV/AIDS, Disability, Development through sport, Transformation, Community development, Community health promotion, Physical activity, Sociology of sport, Sport and law, Sport and policy, Project management, Sports for development, Sport and peace, Conflict transformation, Monitoring and evaluation, Sport and psychosocial tools
Wits	Bachelor of Education in Intermediate Phase Teaching MSc(Med) in the field of Sports Science	Wellness, Health promotion and rehabilitation, Exercise testing, Exercise principles, Coaching, Conditioning, Sports performance, Sports vision, Physical activity and sports in schools
WSU	Bachelor of Education	Module on Sports Education