Address to the guests and delegates to the Apereo Conference (Roots Conference Facility, Potchefstroom, 8-9 May 2018)

Apereo @ NWU: realising potential and exploring possibilities

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Introduction

Good morning ladies and gentlemen and on behalf of our Vice Chancellor, Prof Dan Kgwadi and the management team of the University, I am really pleased to open this important event in which we share the experience, reflection and research arising from interaction with SAKAI and the Apereo Foundation at the NWU. I am particularly delighted to be able to welcome executive officers of the Apereo Foundation (Mr Ian Dolphin, Dr Charles Severance, and Mr Anthony White) who have travelled to South Africa from the USA, the CEO of OpenCollab, Ms Martilene Orferr, colleagues from the following South African universities (UNISA, WITS, UCT and UWC) and guests from outside South Africa, notably from the University of Ghana, and of course colleagues from the NWU, Chief Director for IT Mr Boeta Pretorious Manager for e-learning at the NWU, Mr Rassie Louw, faculty colleagues and staff from the Centre for Teaching and Learning.

The NWU adopted eFundi, the NWU version of the Apereo LMS solution, in 2007. At that time the NWU has still in the nascent stages of development as a newly merged institution and Apereo, was known as Sakai. Since then the Higher Education landscape has changed substantially, specifically with regard to the enabled and enabling environment required to support teaching and learning. It is therefore appropriate that I use this keynote presentation to discuss, what I want to term Apereo @ NWU: realising potential and exploring possibilities. In my keynote I want to refer to:

- Global Higher Education research
- The NWU T L Strategy 2016 – 2020 with specific reference to:
  The enabling Teaching and Learning environment
  A commitment to open education
- eFundi as virtual teaching and learning environment
- The strategic value of partnerships

Global Higher Education research

Extensive research done by the Educause Learning Initiative (ELI) since 2014 indicates the existence of a so called Next Generation Digital Learning Environment (NGDLE). The New Media Consortium (NMC) 2017 annual Horizon report, which provides insights into trends that will have a meaningful impact on teaching and learning identifies the existence of an ecosystem called the Next Generation Digital Learning Environment (NGDLE) as a key trend that will impact Higher Education institutions partnership with Apereo within the next 2 – 3 years (NMC 2017:44 – 45). This NGDLE ecosystem is defined as follows:

> "*The term pulls together several key themes. What comes next must be informed by the new learning centered model that increasingly characterizes higher education practice (hence next generation). It must of course be digital, given that digital technology has become a component of virtually all teaching and learning practice. It must be about learning, since learning ties together learner and instructor. Finally, it must be an environment or ecosystem—a dynamic, interconnected, ever-evolving community of learners, instructors, tools, and content.*"(ELI 2015: 3)

The learning centred model referred to in this statement suggests a responsiveness in the area of education technology development that derives from changes in education research that have shaped the *NWU Teaching and Learning Strategy* (2016-2020). The Strategy of the NWU itself has moved away from a singular focus on student access in the absence of considerations of student throughput and success, to a more nuanced understanding of the student academic life-cycle which is characterised by an understanding of intersectionality and overlapping interfaces between access, success, support and inclusion. Why is this timely and necessary now? The dramatic developments concerning #FeesMustFall and #RhodesMustFall, together with a range of other 'Fallist" movements in South Africa in 2015, signalled clearly to the higher education sector in South Africa a fundamental shift in both purpose and functions of universities (Balfour, 2018)[1]. In short, awareness has been raised in leadership within the sector, that student experience of institutions as inclusive, rather than alienating; as enabling, rather than limiting; and as caring rather than simply 'institutional', are critical features of student success. Outdated notions of the university as learning site, or ivory tower, or socialisation (Foucault, 1982), assessment and performance monitoring centre, have been supplemented by the notion of the caring and inclusion knowledge-partner. The *NWU Vision Statement* aspiration to be a University focused on social justice, and embodying an ethic of care, reflects this national

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[1] As described by Jansen in 2017 in his book *As by Fire*.

shift in both sentiment and focus concerning core business. It is thus not surprising that the NWU's *Teaching and Learning Strate*gy makes explicit reference to new understandings of the role of teachers and learners, knowledge and learning. Technology features as a powerful opportunity to give expression to these foci, but is itself also a focus recognised by the University in its formulation of the global and national imperatives shaping education in this new century in terms, for example, of "Educating students for the challenges of the twenty-first century", "Creating a more responsive higher education system", "Leadership in multimodal education", and "Innovative teaching and learning designs" (*NWU Teaching-Learning Strategy*, 2016-2020: pp.6-10).

Thus in order to realise the Graduate Attributes in terms of creating "Responsible and engaged members of society, knowledgeable, highly-educated individuals and professionals, Innovative, critical thinkers, Effective communicators, and Skilled collaborators and team members, a particular approach to teaching and learning needs to be considered which is "an educational experience that (is)...outcomes-oriented, student-centred...focused on inquiry-based, active, participative, and meaningful learning within a supportive, responsive, and enabling learning environment" (p.13). In this endeavour it is important to understand what distinguishes the fourth industrial revolution (Schwab, 2017), from its predecessors in teaching and learning terms. This is not technology in and of itself. Every industrial revolution has been characterised by a combination of pressures and change which lead to innovation. In the twenty-first century change and innovation have been driven by a desire (as seen also in the Fallist movements) for more control over the teaching and learning experience. In education terms this is known as self-direction, self-reflection and self-discovery. These together with participatory pedagogies are key features of a disposition to be created through an enabling learning environment in which the NWU aspires to the "innovative development and deployment of ICT infrastructure to support teaching and learning activities" (p.19).

The shift from technology development to managing teaching and learning through the adoption or introduction of a standalone single solution, the Learning Management System (LMS), to enhancing capacity for self-direction and participation (Tisdell, 1995) has also revolutionised the traditional role of the instructor (management of learning) to an approach that is perforce learning and learner-centred (Weedon, 1987). In these terms the skills required by the teacher have shifted back to a focus on curriculum making and design and expertise with technology in order to enable design for self-direction and participation without the teacher necessarily being in front (Boyer, 1996). The research further indicates that no single solution can address this approach effectively but that an ecosystem of supporting technologies/ technology enabled T L approaches/ practices/ systems must be considered. The role of the LMS therefore changed significantly from a standalone single solution to that of a key component that contributes to towards effectiveness of an ecosystem. The contribution of the LMS is identified as a platform that provide access to a learning interface that integrate technology tools with the practice of online facilitation.

The ELI research describes the impact that the NGDLE has, and increasingly will have on teaching and learning, as follows:
> *"The NGDLE is conceived as both an ecosystem and a mind-set that will allow students and instructors to benefit from the full range of developments in higher education. The NGDLE concept seeks a balance between the openness of learning and the need for coherence in the environment. The concept emphasizes personalization, collaboration, and accessibility/universal design—all essential to learning. Because the NGDLE conceives of learning as happening in an ecosystem and not within a platform, it focuses not on IT but on learning enablement."*

The NWU T L Strategy 2016 – 2020

The enabling Teaching and Learning environment
The *NWU Teaching and Learning Strategy 2016 – 2020* states that the NWU is committed to the "*creation and continuing development of a teaching and learning environment in which technology is used to provide on- and off campus students with a learning experience that makes optimal use of face-to-face and e-learning approaches*".

Key strategic driver 8.7 of the NWU T L strategy explains the Enabling Learning Environment that must be developed and maintained in order for the NWU Teaching and Learning plan to achieve/ attain all the strategic goals of the NWU T L strategy. A number of supporting technologies/ approaches/ practices/ systems are identified that exist or should be explored/ developed/ adopted to contribute towards the enabling of an environment. The focus of the strategy is therefore not on one single technology/ approach/ practice/ system as the _solution,_ but the _enabling ability_ that contribute towards an _ecosystem_ of technologies/ approaches / practices/ systems that constitutes a _learning environment_. The strategic driver is also formulated in such a way that the achievement of the strategy goals presuppose the existence, creation,

adoption, development and maintenance of an enabling teaching and learning environment to support teaching and learning at the NWU.

Given the aforementioned and informed by NGDLE research the development and maintenance of an enabling teaching and learning environment at the NWU focus on:
T L Technology adoption that:
- Integrates technology into T L approaches and practices informed by sound pedagogical principles and based on the enhancement and enabling capabilities that it provides
- Provide a teaching and learning environment that can be developed and maintained to enable innovative teaching and a quality learning experience

Technology enabled and enhanced Teaching and learning that
- Develop capacity of staff and students to function optimally in NWU T L environment
- Contributes to the enhancement of the learning experience and transforming pedagogical practices to ensure efficiency and effective support to both staff and students.

Technology resource management and help desk support to
- Ensure equitable access to technology resources and helpdesk support when students participate in blended learning, staff innovate with technology enhanced teaching practices and multimodal T L is presented at the NWU.

Research, innovation, networking and collaboration to
- Investigate, develop, source and obtain technology that contribute to and support the enabling T L environment at the NWU
- Contribute to and participate in the academic development field of practice that focus on the enabling of the T L environment through the adoption of technology and presentation of technology enhanced T L.

A commitment to open education

NWU is committed to excellence in teaching, research and scholarship, and to being of service for the common good. Providing opportunities for people to access university education, regardless of their geographic location, culture, age, ethnicity, income, disability, or educational background is fundamental to its mandate as one of South Africa's leading universities. The NWU Teaching and Learning Strategy specifically emphasizes and places a high value on open education, flexibility and self-directedness as enhancing access to quality post-secondary education promotes. The University promotes equity, diversity and inclusiveness in the workplace and society generally.

The NWU's strengths as one of the few leading South African universities with experience, capacity and reach in open distance education as well as contact education, makes it particularly suited to pursue open education with regard to its teaching and learning approach. The NWU has therefore applied to host an UNESCO Chair in OER and Multimodal Learning at its Faculty of Educational Sciences. This will bring together the significant commitment and action of the NWU open education agenda and the global OER initiative supported by UNESCO's Medium-Term Strategy for 2014-2021 and sustainable Development Goals for Quality Education. Through the use of OER the NWU ties in with the international move towards an openness agenda to educational resources, online open publication of academic content and thus contribute to the development of different bodies of scholarship grounded in sound research.

Furthermore, the NWU has also developed an OER Declaration (2018) that relates to the creation, reuse, revision, remixing, redistribution and retention of OER within an Open Licensing framework. This Declaration reflects the NWU intent to support and reward efforts to develop, adopt, integrate, share and research appropriate and high quality OER for use in all modes of delivery as well as continuing education (CE) offerings.

eFundi as virtual teaching and learning environment

The function of eFundi as LMS correlate with the findings of the mentioned Educause research. Within the NWU context eFundi also changed from a standalone single solution to that of a key component that contributes to towards effectiveness of an ecosystem. The contribution of the LMS is identified as a platform that provide access to a learning interface that integrate technology tools with the practice of online facilitation. The NWU officially started to use eFundi as LMS solution in 2007 after an initial pilot phase in 2006. From the first year eFundi use shows a steady increase that indicate a successful adoption of eFundi as virtual teaching and learning environment at the NWU.

Comparison of sites created in eFundi since 2007
In 2017 a total of 7998 sites were created, 5793 course sites and 2205 project sites. The large number of project sites clearly indicate that eFundi is increasingly used for non-academic purposes. eFundi has become an important communication channel for many stakeholders such as the SRC, residences and

student associations. Support services capacity is also developed to use Fundi project sites as virtual office space increasing the scope of the enabling T L environment to include the whole NWU community.

Total number of sites created in eFundi

Year	Number of sites created
2006	10
2007	155
2008	353
2009	1274
2010	1312
2011	1955
2012	2453
2013	3555
2014	4722
2015	5843
2016	6732
2017	7998

Maximum number of simultaneous users at a given time (per month from 2016-2017)

The average number of people working simultaneously in eFundi during 2017 was 5 656. Also note the increase of simultaneous users in February and March of 2017. This can be attributed to the focus of CTL to create an enabling teaching and learning environment for both staff and students with respect to:

- Training sessions with first year students to enable them to engage with learning facilitated in eFundi (58 training sessions to 3011 students)
- Development workshops with academic staff to enable them to use the lessons tool in eFundi to develop technology enhanced learning interfaces (e-guides) (405 academic staff trained in 2017)

Maximum number of simultaneous users at a given time (per month from 2016-2017)

Month	2016	2017[1]
January	748	925
February	6267	12 386
March	3737	10 932
April	2340	4567
May	5463	6091
June	4685	6094
July	4997	4414
August	5713	5818
September	4212	5591
October	3964	6047
November	4835	4048
December	4738	966[2]

The tools most often used within eFundi in 2017 (in terms of recorded events)

- Assignments 452 754
- Messages (e-mail from eFundi) 989 739
- Tests & Quizzes 1 091 921

- Lessons 5 665 747 ;
- Resources 20 876 938

In 2015 a record of 43 668 453 events were recorded in resources. Compared to 2017 this decrease in the number of events can be attributed to the capacity development focus of CTL that enable academic staff to develop technology enhanced learning interfaces that structure the resources tool directly within the lessons tool of eFundi. When students engage with learning facilitation in eFundi they navigate directly to lessons and not to resources

Turn-it-in (TII) is not an official eFundi tool, but is a third-party tool integrated into the assignments tool of eFundi. 120 758 similarity reports were received from Turn-it-it through eFundi (these include pre-grad assignments as well as post-grad dissertations) in 2017.

Total user logins 2013 – 2017

During 2017 students and staff logged into eFundi more than 12 million times during the year - total of 12 039 268 logins. This shows a substantial increase from 2016 when 594 924 logins were recorded for the year. The CTL focus to create and maintain an enabling teaching and learning environment clearly bears the right fruit:

- The capacity of staff and students to engage with the virtual learning environment at the NWU is developed and their experience is one of enablement. eFundi has become an integral part of their teaching and learning experience.
- The adoption of technology that integrates into T L approaches and practices informed by sound pedagogical principles and based on the enhancement and enabling capabilities that it provides. Staff and students experience the T L environment as enabling and want to facilitate and engage with learning presented in an online environment.

Total user logins

Year	Total logins
2013	314 007
2014	695 047
2015	801 825
2016	594 824
2017	12 039 268

The value of strategic partnerships

The fast developing and continually changing field of educational technology continues to have a huge impact on higher education institutions worldwide. This is especially true of the cost involved to acquire or source suitable technology to support institutions teaching and learning strategies. The pressure is on universities to curtail costs but at the same time deliver high quality education and become more operationally efficient. The scope of the teaching and learning environment has also changed substantially. The capacity of the student of the 21 century must be developed to participate meaningfully in learning activities in a range of ways characterised by participatory and collaborative approaches (Powell and Serriere, 2013) and presented in different environments (online, virtual, face-to-face) and modalities (contact and distance, blended).

The NWU realizes that the scope of this task is much broader than that which we as an institution can deliver on our own. We need strategic partners to help us to see the goals of our TL strategy realized. These partnerships include the Online Learning Consortium (OLC), the Educause Learning Initiative (ELI), Multimedia Educational Resource for Learning and Online Teaching (MERLOT), Commonwealth of Learning (COL), National Association for Distance Learning and Open Education in SA (NADEOSA), Higher Education Teaching and Learning Association of SA (HELTASA), Southern Africa Regional Universities Association (SARUA) and of course, the Apereo Foundation.

The partnership with the Apereo Foundation constitute an important resource that thus far provided, and we are convinced will continue to provide quality teaching and learning opportunities to the NWU staff and students. Having the Apereo foundation as a strategic partner gives us a competitive advantage and an opportunity to access the best suited technology resources and expertise.

Current development projects hosted and facilitated by the Apereo foundation and community indicate that the current Apereo LMS implementation at the NWU, eFundi, align well with the description and function of an enabling teaching and learning environment as envisaged in ELI research and the NWU T L Strategy. Of particular interest to the NWU is the following Apereo projects:

> Xerte: Curriculum transformation and renewal at the NWU will benefit from the suite of open source tools for elearning developers and content authors that provide the opportunity to develop interactive learning materials.
>
> Equella: This digital repository that provides a single platform to house teaching/learning, research, media, and library content will be of strategic importance when the NWU develops the NWU Learning Resources Repository (NWULRR)
>
> Karuta: The expansion of the current e-assessment tools in eFundi to include eportfolios will include this flexible tool for the incremental prototyping and the diffusion on the web of digital portfolios or eportfolios.

I trust that this conference will provide the opportunity, as has been the case in the past, for meaningful collaboration and engagement between Apereo partners and staff at the NWU. Please know that it is privilege to host you.

Selected References

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