

# Activating and nurturing the investment of heutagogical resources for equity and quality in self-determined, open, online and distance learning

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## Abstract

Expansion of access to higher education is often inhibited by the lack of teachers, limited physical facilities, the shortage of financial resources and limited technological infrastructure. This paper presents and discusses a framework for collaboratively investing these resources for opening up higher education and selected transformative outcomes from a PhD study and other studies on self-determined learning: 1) from secondary education graduation in teacher-training to successful completions of a) undergraduate education in Physics and b) a master's degree program in Applied Mathematics, 2) from a pass grade to a first class and 3) from intention to drop out to a distinction. Strategies to activate and nurture the investment of heutagogical resources in self-determined, open, online and distance learning are discussed. This presentation/paper may benefit educators, institutions and policy makers who are interested in expanding higher education to underprivileged learners through open and distance learning without learning quality degradation.

**Key words:** Opening up higher education, open learning, heutagogy, quality, equity

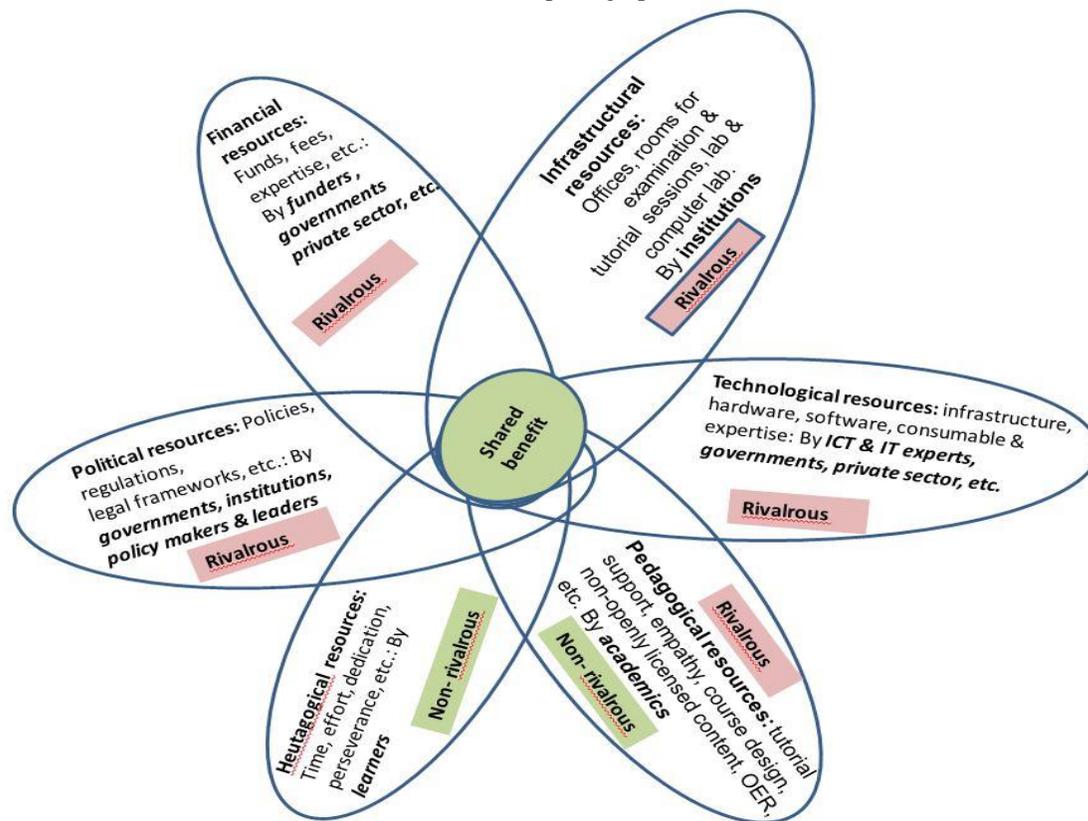
## Introduction

The demand for higher education access has been increasing faster than the expansion of the related infrastructure. In many countries, this imbalance led to socioeconomic exclusion. Open, distance education and eLearning (ODEL) that may help reach a higher number of non-serviced learners is often rejected with concerns of quality degradation. Alternatively, ODEL is more present in political rhetoric than in real practices that contribute to opening up higher education (Nkuyubwatsi, 2016a). On their part, excluded learners are often socially disempowered (Lane, 2009; Lane & Van Dorp, 2011), which inhibits their engagement in open learning at their fullest potentials.

Socially disempowered learners can, however, be re-empowered so that they take the central position in their educational transformation. When learners accept to take the central position in their own learning, they invest their heutagogical resources (Nkuyubwatsi, 2015, Nkuyubwatsi et al., 2015). According to Hase & Kanyon (2001), the role of teachers should be the provision of resources and that of learners should be the actual design of courses they want to take. This design of own learning undertaken by the learner her/himself may be referred to as *heutagogical design*. Nkuyubwatsi (2015) discusses a diversity of resources that may need to be invested synergistically to enable this heutagogical design: political, financial, infrastructural, technological, pedagogical and heutagogical. As Figure 1 indicates, most of those resources are rivalrous (Weller, 2011) but they can be invested effectively to design non-rivalrous open courses and programs. Massive Open Online Courses (MOOCs) exemplify such an investment to make education less rivalrous.

If learners' investment of heutagogical resources is activated and nurtured, higher education can be more shareable to a huge number of learners without undermining quality. However, non-rivalrous pedagogical resources would need to be availed to the learners who are ready to invest their heutagogical resources. The current paper presents and discusses outstanding performances that accrued from activating and nurturing the investment of heutagogical resources, despite the shortage of financial, technological and pedagogical resources in many cases.

Figure 1 A framework for collaborative investment in opening up education



Source: Nkuyubwatsi et al. (2015, p. 57)

## Design

The current paper has a narrative design (Creswell, 2013, p. 7): it reports and discusses transformative learning that emerged as outcomes of learners' investment of their heutagogical resources. For some learners, this investment was activated and/or nurtured by an effective investment of political resources and pedagogical resources (Nkuyubwatsi, 2016b). On political resource investment, 1) national exams were open to non-formal learners, 2) answers sheets were anonymously graded, which made the grading system more transparent, 3) results in the national exams were based on to award secondary education completion certificates, student loans and government sponsorship for undergraduate education, and 4) results in the national exams, cut-off points and beneficiaries of student loans and the government sponsorship were made public. As for effective investment of pedagogical resources, open educational services (Nkuyubwatsi, 2014a; 2016a; 2016b; 2016c; Jacobi & Woert, 2012; Mulder & Janssen, 2013; Mulder, 2015; Ouwehand, 2012; Valkenburg, 2012; Woert, 2012) related to invigilation and marking/grading non-formal learners' answer sheets were provided. The investment of heutagogical resources by other learners was activated deliberately in a PhD study that had a *transformative* (Creswell, 2014, p. 16) design. In this study (Nkuyubwatsi, 2016d), the researcher moved beyond qualitative and quantitative data collected through conventional research methods to influence policies and practices that may contribute to opening up higher education. One of the practices the researcher influenced was the investment of heutagogical resources among disadvantaged and underprivileged learners.

## Results

The outcomes of the investment of heutagogical resources were reflected in the three moves discussed below:

### ***Case 1: From secondary education graduation in teacher-training to BSc in Physics and MSc in Applied Mathematics***

After its launch in 1998, Rwanda National Examination Council (NEC) introduced many reforms in national examinations administration: 1) opening national examinations administered to secondary education completers to non-formal learners, 2) grading answer sheets anonymously, 3) establishing the results in the national exams as a benchmark for the provision of government sponsorship and student loans and 4) public release of all results in the national exams, the cut-off points for government sponsorship and student loans as well as winners of the sponsorship and loans. As a result, many underprivileged learners who could not access higher education otherwise hunted notes of secondary education courses and engaged in non-formal self-directed/self-determined learning and enrolled in national exams in attempt to score above the cut-off points for student loans and certificate of secondary education completion.

In 2001, however, all teacher-trainees were denied student loans and government sponsorship, initially with a claim that they could not be successful in higher education. After criticism, teacher-trainees who had performed high in national exams would be awarded student loans after two years in job. In 2003, however, the cut-off point for student loans awarded to teacher-trainees was hiked to three times higher than that for student loans offered to secondary education graduates in some other fields. Many teacher-trainees borrowed and learned, on their own, notes of courses that were taught in fields that had lower cut-off points and retook national exams in those fields. Among these self-determined learners are two underprivileged teacher-trainees who borrowed notes and exercises from secondary education graduates in the field of *Math-Physique*, learned the notes and exercises on their own and took national examinations in this field to win student loans and government sponsorship. One of them completed a bachelor's degree in Physics while the other completed a master's degree in Applied Mathematics. Their current salaries are three to five times higher than their previous salaries (before attending university education).

### ***Case 2: From a pass grade to a first class***

In 2006, another teacher-trainee completed secondary education with a pass grade (the lowest passing grade in the Rwandan grading system when the learner completed secondary education). The learner wanted to apply for a scholarship, but she had no chance due to her low performance. She was even not eligible to apply for student loan in Rwanda because her grade was far below the cut-off point. She had worked full-time for three years, with a monthly salary of approximately \$46: her three year savings could not pay tuition fee and her family could not afford higher education. The learner attributed her inability to get student loan or scholarship to her underprivileged background. However, her mentor challenged her with an argument that if her performance were high, she could apply for international scholarships that were provided on merit-basis.

As the mentor himself won international scholarships, the mentee was inspired. After this inspiration, the mentor advised the mentee to start undergraduate education in a local institution, paying tuition fee herself, and aim to complete undergraduate education with a first class. The mentee left her job to focus on her undergraduate learning. She completed the first year with an upper second class, very close to a first class. The mentor reassured her that she could definitely make it to a first class. Her high performance attracted financial aid from individuals who felt it was wrong to let down such a high performing student. In the subsequent three years, her performance was a first class; similar to her average undergraduate grade. After her four year epic move from a pass grade to a first class, she received invitations to submit her applications and participate in interviews from employers who headhunted skilled graduates. She secured a job for which she is paid five times higher than her previous earning.

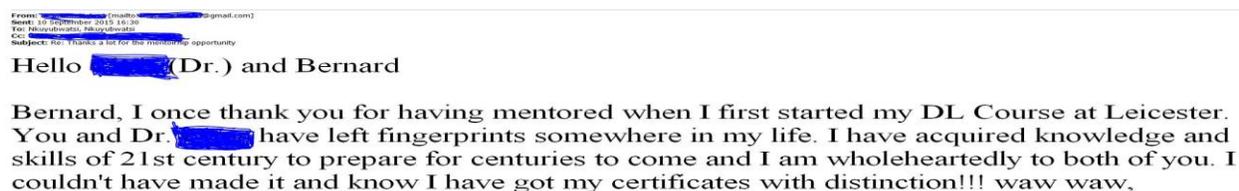
### ***Case 3: From intention to drop out to a distinction***

In the early stage of his PhD study, the researcher was approached by an academic at the University of Leicester with an invitation to mentor an online Rwandan student. For the researcher, this was an opportunity to catalyze the investment of heutagogical resources in a British university in effort to increase recognition of transformative accomplishments of underprivileged/disadvantaged learners. The researcher himself had first-hand experience in online learning of an MA program with a British university that had been completed successfully despite difficulties

discussed below. The mentee worked for a college that was not connected to the Internet yet. He could pay for four kilometer bike rides to a nearby hospital where he could access more reliable Internet. He could also tether his Samsung phone to his iPad provided by the University of Leicester at the beginning of the program or to his laptop to access the mobile phone Internet via the laptop.

In a Skype mentorship session, the mentee was concerned about the poor quality and irregularity of the Internet he could access and mentioned that he had considered dropping out. The researcher/mentor reassured the mentee that the poor quality and irregularity of the Internet access are manageable and controllable challenges that should not inhibit success in online and distance learning. The researcher disclosed himself and shared with the mentee his online learning experience in a British university. In two of the four modules of this online MA program, the researcher had made regular three-hour bus trips to access the Internet. In some cases, such trips were not possible because outward traffics in the entire district were stopped by security forces due to political events. Other difficulties were electric power cuts as well as courses and assignments that, in a few cases, had limited socioeconomic and cross-cultural translation enablers (Nkuyubwatsi, 2014b). The researcher/mentor advised a combination of both online and offline learning, a regular record of own engagement in the program, avoidance of lagging behind in course activities and moving ahead to the next week activities whenever weekly activities were completed before the end of the specific week. Moreover, the researcher recommended compensating unavoidable disadvantages such as learning in a foreign language, irregular Internet access, unpredicted electric power cuts, learning courses designed from a foreign perspective, etc. with more investment of time and effort in learning activities. The mentee continued his online master's degree program. About a year and half later, the academic who had initiated this relation disclosed that the mentee was top of the class, outstanding performance confirmed by the mentee (Figure 2).

Figure 2 The confirmation of completion of an online MA with distinction by mentee in Case 3.



From: [redacted] (mailto:[redacted]@gmail.com)  
Sent: 10 October 2015 14:30  
To: Bernard, Nkuyubwatsi  
CC: [redacted]  
Subject: Re: Fitness & for the mentorship opportunity

Hello [redacted] (Dr.) and Bernard

Bernard, I once thank you for having mentored when I first started my DL Course at Leicester. You and Dr. [redacted] have left fingerprints somewhere in my life. I have acquired knowledge and skills of 21st century to prepare for centuries to come and I am wholeheartedly to both of you. I couldn't have made it and know I have got my certificates with distinction!!! waw waw,

(Screenshot taken and used with the sender's permission)

## Discussion

The accomplishments of the learners indicate that quality learning may be maintained if the learner is re-empowered and the investment of his/her heutagogical resources is activated and nurtured. In the three cases, such an investment was activated and nurtured in two ways: 1) a constructive alignment (Biggs, no date) of open educational services with learners' needs, employability and capabilities development (Nkuyubwatsi, 2016b) and 2) mentorship (Nkuyubwatsi, 2016d).

A constructive alignment of open educational services with learners' needs, employability and capabilities development motivated non-formal learners to hunt learning resources, learn on their own and take national exams. Some of these learners did not surrender despite failure on first and second attempts: one of the non-formal learners in Case 1 had to retake national exams up to three times to meet the performance requirements for the award of the student loan he was after (see also Nkuyubwatsi, 2016b). The perseverance of these learners confirms the argument that assessment of open learners' accomplishment for credit increases engagement with open educational resources and open courses (Lane & Van-Dorp, 2011; Yuan & Powell, 2013; Mulder, 2015). The constructive alignment of open educational services with learners' needs, employability and capabilities development accrued from an effective investment of political resources (Nkuyubwatsi, 2015; Nkuyubwatsi et al., 2015) in a way that created value (Nkuyubwatsi; 2014a; Nkuyubwatsi, 2016a) for non-formal learners. Secondary education certificate or/and student loans were awarded to successful non-formal learners under same conditions as formal students. This value creation motivated non-formal learners' investment of heutagogical resources, which led to the transformation of lives of many of them.

As for mentorship, this was one of transformative aspects of the researcher's PhD study that had an agenda to influence policies and practices in effort to improve the status-quo. One of the improvements the researcher wanted to achieve was a better understanding of empowerment for success of disadvantaged/underprivileged learners, in both ODeL and conventional education. Disadvantaged and underprivileged learners' success is often inhibited by social disempowerment they experience (Lane, 2009; Lane & Van Dorp, 2011) rather than their academic inabilities. Both mentees featured in the current paper exhibited signs of social disempowerment reflected in 1) self-perception as unable to win scholarship or/and student loan due to low socioeconomic background and 2) self-perception as unable to complete successfully an online master's degree program in a British university due to limited access to reliable Internet.

Thanks to his first-hand experience with successful learning in conditions that were similar to the learners', it was obvious to the researcher that the mentees needed re-empowerment and activation of their investment of heutagogical resources (Nkuyubwatsi, 2015; Nkuyubwatsi et al., 2015). The researcher/mentor avoided the mentees' acceptance of their socioeconomic status or disadvantages as natural, inevitable and necessary (Kincheloe & McLaren, 2005, p. 304), or as a lifelong doom (Nkuyubwatsi, 2015) and activated their investment of heutagogical resources. When heutagogical resources are invested, self-determined learners /heutagogues position themselves at the center of their educational transformation to manage and control their own success. It is at this level that heutagogical resources become critical ingredients and complements to pedagogical, financial, technological, infrastructural and political resources. The result of a synergistic investment of these resources is transformative accomplishments such the ones made by the learners featured in the current paper.

The performances of the learners featured in this paper constitute robust evidence that heutagogy (Hase & Kanyon, 2001; Anderson, 2010; Canning, 2010; Canning & Callan, 2010; Blaschke, 2012; Nkuyubwatsi, 2016a) makes difference, especially when it complements pedagogy. The accomplishments of learners in Case 1 and Case 2 indicate that underprivileged self-determined learners in under-resourced settings may undertake a solitary journey to achieve high quality learning and their socioeconomic inclusion. The mentees did not have access to any community of professionals or learners who shared their visions. The solitary experience of these underprivileged self-determined learners' journey was caused by their lack of access to learning communities and related enabling technologies due to their socioeconomic disadvantages, rather than their reluctance to participate in such communities.

## **Implication for quality and equity in learning**

When learners invest their heutagogical resources, they may become collaborators in learning quality enhancement, rather than consumers of commodified "high quality courses" designed for their consumption. While learners in Case 1 had been denied opportunities for their undergraduate education, initially with a claim that they would fail, their investment of heutagogical resources and their subsequent successes demonstrate that as long as opportunities are open, the learning quality is mainly in the hands of heutagogues. This was confirmed by the shift from a pass grade to a first class accomplished by the learner in Case 2.

In a similar direction, the investment of heutagogical resources of the learner in Case 3 contributed to his quality learning and move from intention to drop out to completing his online master's degree program top of the class: with distinction. This mentee's performance challenges claims that in Rwanda, there are no technologies that can lead to quality learning in ODeL. In May 2015, for instance, the researcher gave a presentation at the University of Rwanda, along other presenters from a well-resourced society who claimed that in Rwanda there is no Internet connectivity that can enable quality ODeL. Such a claim may lead to the surrender of learners who are willing to invest their heutagogical resources in ODeL and discourage efforts to use this learning mode to open up higher education to underprivileged learners. The mentee in Case 3 used the limited Internet connectivity available in Rwanda and outperformed peers in societies where the connectivity is of high quality/speed and accessible in almost every household. Hence, quality learning accrues, not only from the ease of access to resources, but more importantly, from an effective use of available resources to take most from them.

The transformative accomplishments by learners featured in the current paper may alleviate concerns on learning quality if open learning content, open courses and open educational services are availed to underprivileged learners to achieve equity in higher education. These accomplishments may also inform future practices and innovations in ODeL in institutions that have an agenda to achieve socioeconomic inclusion, especially the ones in under-resourced

settings. Since heutagogical resources are non-rivalrous, their massive investment may lead to sustainable inclusion of underprivileged learners who are willing to engage in open learning. These learners may only pay fees for open educational services needed for assessment of their accomplishment from open learning for credit. With an agenda to open up higher education, these fees should be much lower than tuition fees.

## Conclusion

The investment of heutagogical resources among learners featured in the current paper was activated and nurtured in two ways: 1) an effective investment of political and pedagogical resources and 2) mentorship. This investment led to transformative high quality learning among underprivileged and disadvantaged learners in Rwanda that resulted in moves from: 1) secondary education graduation in teacher-training to successful completions of a) undergraduate education in Physics and b) master's degree program in Applied Mathematics, 2) a pass grade to a first class and 3) intention to drop out to completion of an online master's degree program in a British university top of the class: with distinction. Focus on re-empowerment of socially disempowered learners as well as activation and nurturing the investment of their heutagogical resources may help institutions open up higher education to more underprivileged learners without affecting the learning quality. Related innovations may lead to sustainable and equitable provision of high quality higher education through ODeL.

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