Taking stock: Seven years of Conservation Skills Development and Training on Telperion, Mpumalanga

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Abstract:
The University of South Africa’s (Unisa) National Diploma in Nature Conservation (NDNTR) is a vocational diploma and its curricula content requires work-integrated learning (WIL). The essence of WIL is that it provides the opportunity for students to acquire and apply knowledge in workplace contexts, with the idea that they are work ready and more employable upon graduation. The greatest challenge in providing this workplace context is the lack of willing and qualified industry mentors to supply the need and demand of this WIL component.

In an effort to address this, between seven and ten, one-week long excursions, funded by Ernest Oppenheimer & Son (EOS) and hosted by Unisa, are held per year on Telperion. Each focuses on a WIL curricula learning outcome and always incorporates various aspects of the critical cross field outcomes.

There has been a constant and steady growth in the number of students positively affected by the partnership between EOS and Unisa, through this formalized WIL excursion programme, with up to 44% of the 2014 graduates having come through this programme.

Introduction and Problem Statement
The Unisa is one of six Comprehensive Universities in South Africa, whose mandate it is, to offer both academic and vocational diplomas and degrees. NDNTR is one of these vocational diplomas and its curricula content comprises theoretical modules, practical modules and WIL modules. The essence of WIL, is that it provides the opportunity for students to acquire and apply knowledge in workplace contexts, with the idea that they are work ready and more employable upon graduation.

The author (Wilson, G.A.), who has as been both directly (currently for two years as the module lecturer) and indirectly (previously for six years as an industry representative) involved with the WIL component of this qualification, has experienced first-hand the challenges associated with completing this aspect of the qualification. This has an obvious rippled effect on the completion of the qualification as a whole. The greatest challenge being the lack of willing and qualified industry mentors to supply the need and demand of the WIL component, as co-operative education partners. If one acknowledges that the environmental sector is a scarce skill one, then this not only affects the students and institution to which they belong, but the conservation industry as a whole.

In an effort to address this problem, Unisa has partnered with EOS and have been granted access to Telperion. It is used by Unisa as a living simulation\(^1\), from which to conduct NDNTR WIL excursions, each linked to WIL learning units and critical cross field outcomes. The creation of this supportive and conducive learning focused industry WIL provider, has addressed many students’ needs in terms of WIL provision and this positive effect will be explored further in this poster.

Methodology:
On average, there are between seven and ten, one-week long excursions, funded by EOS and hosted by Unisa, per year on Telperion. Each focuses on a WIL curricula learning outcome and always incorporates various aspects of the critical cross field outcomes. The lecturer, directly responsible for the learning unit outcome linked to the theory part of the curricula is encouraged to participate, thereby encouraging compliance and support for the specific WIL activity being addressed.

Major themes addressed at these excursions include soil erosion control, fire management, alien plant control, veld condition scoring, animal census techniques, animal population dynamics, miniSASS, conservation communication and environmental education and general technical aspects. The reserve benefits in turn when students actively address issues on the reserve whilst learning, such as the erosion control structures built when addressing soil erosion.

Results
Table 1: Indicating the Conservation training breakdown with regards numbers of excursions, students and mentored hours per year, from 2008 to 2014 with an estimated projection for a completed 2014 based on an average participation (*one more excursion is still outstanding for 2014).

<table>
<thead>
<tr>
<th>Year</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of excursions</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>No. of students</td>
<td>95</td>
<td>30</td>
<td>84</td>
<td>83</td>
<td>45</td>
<td>73</td>
<td>105</td>
</tr>
<tr>
<td>Excursion hours/year</td>
<td>338</td>
<td>130</td>
<td>429</td>
<td>483</td>
<td>144</td>
<td>472</td>
<td>314</td>
</tr>
</tbody>
</table>

Figure 2: A total of conservation skills development and training hours provided to students per year, from 2008 to 2014, with an estimated projection for a completed 2014 based on average participation (*one more excursion is still outstanding for 2014).

The numbers of graduates who can attribute their success to the excursions held at Telperion are increasing annually:

In 2012, 3 of the 11 (27%) benefited from this partnership
In 2013, 4 of the 14 (29%) benefited from this partnership
In 2014, 12 of the 27 (44%) benefited from this partnership

Discussion and Conclusion:
The two obvious dips seen in Figure 1, in the years 2009 and 2012, can be directly linked to staff and organizational restructuring. Apart from these two years, there has been a constant and steady growth in the number of students positively affected by the partnership between EOS and Unisa, through the formalized WIL excursion programme.

The success of this programme lends itself for consideration in other provinces, so that students in other areas of the country may also benefit from this partnership. EOS managed reserves in the rest of the country would be able to act as host reserves to meet this end.

Whilst this programme alone is unable to address the scares skill shortage in conservation, it is at least starting somewhere and promising to make a difference.

References:
1 Department of Environmental Affairs, Environmental Sector Skills Plan for South Africa, May 2010
2 Living simulation: a term coined by the author; Wilson, A. To depict that WIL experience which is not yet fully developed. E.g. (biomonitoring of a water catchment); where the experience is real as much as an actual experience in data collection and analysis gained, the work related context is missing. This is aligning to real simulation but a real-long experience gained along the process.

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Figure 1: Students conducting a miniSASS on Telperion (G. Wilson 2013).