

Undergraduate Work Related Learning Impact Study

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Abstract: The paper uses an ex-post facto research design to evaluate impact and benefit of Work Related Learning (WRL) on a cohort of 53 undergraduate Geography and Environmental Studies students, 61% of whom had no prior work experience. To determine impact and benefit of WRL, A five point semantic differential Scale was used to compare students' self evaluation of their confidence, competencies in Geography and Environmental Studies, knowledge of demands and challenges of the work place and satisfaction with WRL among other variables at two time periods, namely, before WRL (August 2002) and after WRL (August 2003). Results corroborate the consensual view held by students that, WRL has both short and long term beneficial outcomes. Fifty-nine percent of the students reported a high level of satisfaction with WRL. Seventy-three percent of the students reported having good to excellent knowledge of professional, social and cultural demands of the world of work. An increase in students' knowledge of potential employment opportunities in Geography and Environmental Studies after WRL was observed. Additional spin-offs from WRL include, job offers (42%), vacation job offers (15%) and sponsorship for students' study (Z\$22 million).

Key words: Impact study, WRL, ex-post facts

INTRODUCTION

The unemployment rate in Zimbabwe is 75%. Contraction of the job market is attributed to economic implosion. The educated unemployed without requisite skills demanded by industry make up a significant proportion of the unemployed^[1]. Against this backdrop, calls have been made by both the public and the private sector for university education that is relevant to the developmental needs of the country. Others have advocated for education that produces university graduates who can create rather than seek employment^[2].

Global trends in education reinforce the same sentiments, namely, that university education should enhance graduate employability and job prospects by reducing the gap between graduate output and skills demand^[3]. WRL is seen as availing University Faculties and departments an opportunity for corroborative efforts between universities and potential employers to increase graduate absorption rates in the job market^[2,4-6]. Both the Dearing and the Boyer Reports of 2002 on WRL in the United Kingdom and the United States respectively called for incorporation of more WRL in university undergraduate studies^[7]. Inclusion of WRL in university majors is meant to allow university faculties and departments to structure subjects and course content in response to both internal and external demands for curriculum relevancy in order to meet specific country

developmental needs.

In addition, it is envisaged that WRL has the capacity to initiate students to the demands of professional, cultural and social aspects of the world of work^[8]. Networking through WRL exposes students to potential career opportunities in Geography and Environmental Studies, thereby facilitating marketing of the subject to a wider public^[9]. The complexity and multi dimensional nature of the WRL environment is expected to challenge, excite and stimulate proactive life-long learning among students^[7].

The Geography and Environmental Studies Department at the Midlands State University in Zimbabwe enrolls post A level students for undergraduate courses. WRL is undertaken in the third year of the four-year BSc honours degree. Minimum and maximum duration of WRL is 10 and 12 months, respectively. Assessment of WRL is threefold:

- a project report on a subject related problem investigated during WRL;
- field visit by department lecturers for oral and written assessment; and,
- written assessment of the student's performance by personnel at the cooperating organization.

The Department has two groups of students who have already completed WRL. No evaluation has been

undertaken to ascertain adequacy, relevancy, utility and quality of learning outcomes associated with the current paradigm of WRL. The present study is an attempt to fill this gap.

The Department of Geography and Environmental Studies, like other departments at the university enrolls two intakes of students a year; in March and August. Each intake has between 35-40 students. Since 2002, the department has had two consecutive groups of students on WRL. The purpose of the research was to determine viability and sustainability of WRL in view of the high potential demand for WRL placement situations.

The objectives of the study were to;

- assess availability of WRL placement opportunities for Geography and Environmental Studies students.
- identify WRL cooperating partners.
- ascertain the relevancy of Geography and Environmental Studies course content to students' key roles while on WRL.

MATERIAL AND METHODS

The study used an ex-post facto research design. Questionnaires with three categories of questions namely, closed questions; five point semantic differential scale and open-ended questions were used to collect data. Background characteristics of students were collected using closed questions while data on impact and benefit of WRL were collected using students' self rating on a five-point semantic differential Scale and open ended questions. Questionnaires were pilot tested on 15 students. Responses were used to improve the content validity of the research instruments. The internal consistency reliability estimate of the research instruments was calculated using Cronbach's Coefficient Alpha ($\alpha=0.95$),^[3].

The sample was made up of all 53 undergraduate students representing the second cohort of Geography and Environmental Studies students who went on WRL between August, 2002 and August, 2003. To obtain baseline data on each student, against which to measure students' self-rating after WRL, questionnaires were distributed to students during the last lecture before commencement of WRL in August 2002. The Department's enrolment name list for second year students was used to determine the response rate, which was 100%. Students were asked to write their registration numbers on questionnaires.

In August 2003 after returning from WRL, the same group of students was asked to complete questionnaires identical to questionnaires they had completed before proceeding on WRL in 2002. The response rate was 100%. Guided by students' registration numbers, pre and

post WRL questionnaires for each student were matched and results compared. The study compared students' self-rating of their confidence, competencies in Geography and Environmental Studies, knowledge of demands and challenges of the work place and satisfaction with WRL among other variables, at two time periods, namely, before WRL (August 2002) and after WRL (August 2003). Results of open-ended questions were qualitatively analysed. Frequencies, percentages and cross tabulations were used to analyse data collected using closed questions.

RESULTS AND DISCUSSION

Of the 53 students returning from WRL in August 2003, 67% were male while 33% were female. Eighty-three percent and 15% of the students were between 20-24 and 25-29 years old, respectively. For 61% of the students who had no prior work experience, WRL provided the first exposure and experience of the world of work. Thirty-nine percent of the students had previous work experience of an intermittent nature, generally as relief high school teachers (Table 1).

Fifty-seven percent of the students have permanent residence in an urban area while 43% have permanent residence in a rural area. The majority of students did WRL in an urban area (70%). Rural areas attracted 9% of

Table 1. Background characteristics of students

Characteristic	Number of students	Percentage of Students
Sex		
Male	35	67
Female	17	33
Age (years)		
20-24	43	83
25-29	8	15
>29	1	2
average age	-	22
Had worked before WRL		
Yes	20	39
No	32	61
Permanent residence is		
Rural	22	43
Urban	30	57
WRL was a result of		
Self deployment	31	60
Department assisted deployment	21	40
Students doing WRL at organization with students from		
Same department	26	50
Other Departments	18	34
Other Institutions	8	16
Students replacing		
March (2002) Intake students	9	17
WRL was in		
Rural area	5	9
Urban area	36	70
Both	11	21
Switched Organizations while on WRL		
Yes	7	13
No	45	87

the students. Twenty-one percent of the students did WRL at organizations whose activities spanned the rural-urban divide requiring part year residence in both rural and urban areas. Sixty percent of the students were self-deployed while 40% of the students were assisted by the department to find organizations where they could do WRL. Student self-deployment is encouraged in order to minimize the number of students who transfer from one organization to another during the course of WRL period. Self-deployment is also meant to simulate reality by presenting students with practical situations for practising job-hunting skills. Only 13% of the students transferred from one organization to another during the period of WRL, for reasons ranging from incompatibility of skills (11%) and failure to secure a monthly allowance (2%).

No departmental policy to control intra or inter-regional spatial distribution of students while on WRL was in place. Clustering of students at an organization is neither covertly nor overtly encouraged. Where clustering occurs as shown in Table 1, it is coincidental or designed by the students themselves. Geography and Environmental Studies students reported doing WRL at an organization with students from the same department and intake 50%, the same intake but different departments 34% and different institutions (university/polytechnic) 16%.

Only 17% of the students (August 2002) replaced outgoing March 2002 intake students at organizations for purposes of WRL. The small percentage indicates continued growth and diversity in the number of cooperating partners.

Choice of province for WRL: Table 2 shows province of permanent residence, proportion of students doing work related learning within or outside the province of residence and percentage of all students doing WRL in any one province.

Fifty-three percent of the students chose to do WRL in the province of permanent residence in order to optimize personal welfare through having access to family

accommodation and financial support. However, for married students the major consideration was to minimize psychic or social costs. In addition, information thresholds about potential WRL cooperating organizations from the student's perspective vary inversely with distance from place of permanent residence. Forty-seven percent of students did WRL outside provinces of permanent residence. Major incentives were subsidized or free accommodation and transport and probability of getting a monthly allowance from WRL cooperating organization. Overall, the Geography and Environmental Studies department had students doing WRL in every province of the country with a substantial number in the Midlands (25%), Harare (19%), Masvingo (15%) and Matebeleland north (13%). Matebeleland south and Mashonaland west Provinces had the least number of students, namely 2% each, respectively.

WRL by sector of deployment: Traditionally, Geography has yielded limited vocational options. Choice of careers has often been unidirectional, with the majority of graduates being absorbed by the Education sector [10]. Figure 1. shows percentage distribution of all students, by WRL deployment sector.

The department was able to market students to both the public sector and the private sector including NGO's. Diversity in the range of WRL cooperating organizations is desirable, in order to expose students to differential learning contexts. Students did WRL at government and

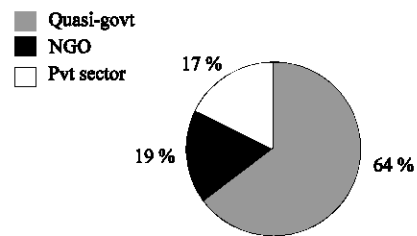


Fig. 1: Overall percentage distribution of students by deployment sector

Table 2: Percentage of students by province of residence and province of WRL

Province	Percentage of students residing in Province	Percentage of students residing in province doing WRL in province	Percentage of students doing WRL outside province of residence	Percentage of students doing WRL in province
Matebeleland South	6	4	2	2
Mashonaland East	2	2	0	8
Midlands	21	15	6	25
Bulawayo	2	0	2	4
Mashonaland West	4	0	4	2
Masvingo	28	13	15	15
Manicaland	9	2	7	8
Matebeleland North	13	9	4	13
Mashonaland Central	2	0	2	4
Harare	13	8	5	19
Total	100	53	47	100

Table 3: Students' self evaluation of impact and benefit of WRL

Impact/Benefit	Overall percentage of students				
	None	A little	An average amount	A good amount	An excellent amount
Knowledge of employment opportunities in subject :					
Before WRL	28	30	30	11	0
After WRL	0	0	15	53	32
Knowledge of professional, social and cultural demands of the world of work:					
Before WRL	25	49	36	0	0
After WRL	0	0	7	51	42
Knowledge of how to apply skills learnt to practical situation:					
Before WRL	30	38	28	4	0
After WRL	0	19	38	41	2
Knowledge of skills needed to be effective in the work place:					
Before WRL	17	30	53	0	0
After WRL	0	0	8	45	47
Self confidence:					
Before WRL	14	29	40	17	0
After WRL	0	0	8	45	47
Ability to network in a variety of situations:					
Before WRL	13	40	34	13	0
After WRL	0	0	8	34	58

quasi government agencies (64%); NGO's (19%); and private organizations (Business) (17%).

Key roles of students on WRL: Geography underwent internal and external restructuring in the late 1990's by taking on environment and computer based courses in order to make academic Geography more marketable. Figure 2 shows that key roles performed by students while on WRL gave them exposure to skills and practical activities based on environment oriented sub-disciplines at the expense of Geography oriented sub disciplines which are critical for students' understanding of the environment. Marginalization of Geography sub disciplines during WRL is also evidenced by the fact that, when students were asked to identify courses that they found useful on WRL, 90% of the students listed environment-oriented courses. When asked to propose any courses they should have done before going on WRL, almost all students (98%) suggested environment-oriented courses. Given a choice, 50% of students would want to do only environment-oriented courses. A great reluctance among students in the department to do Geography oriented courses because of the perceived limited employment opportunities was evident. Succumbing to students demands would be tantamount to vocationalizing the subject. Such a move would also undermine the intellectual and internal integrity of the subject^[10]. Where key roles were perceived to enhance acquisition of skills and knowledge of environment related sub disciplines,

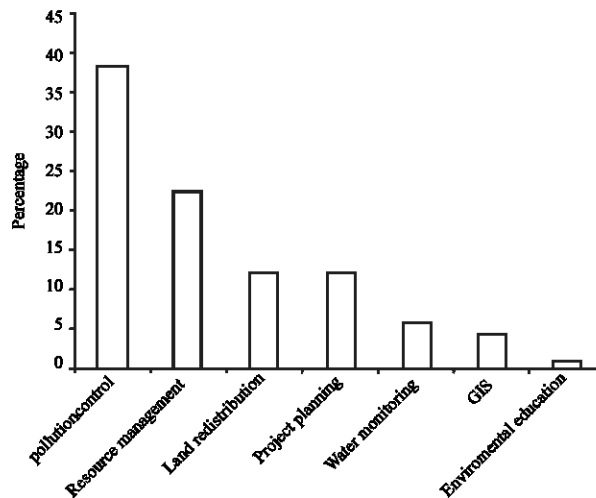


Fig. 2: Key roles of students on WRL

students rated WRL as having been completely relevant to their studies.

Personal impacts and benefits of WRL: Students were asked to do a critical self-evaluation of the impacts and benefits of WRL for two time periods, namely, before WRL and after WRL for a wide range of skills and knowledge (Table 3).

Knowledge of employment opportunities in Geography and Environmental Studies: Table 3 shows an

overwhelming increase in the number of students who have knowledge of employment opportunities in Geography and Environmental Studies after WRL (85%). Before WRL, 58% of the students had reported having no knowledge or little knowledge of employment opportunities in Geography and Environmental Studies. Enhanced career awareness was achieved in part through intra and inter-organization networking. Students doing WRL at Non-Governmental Organizations (NGO's) (19%), for example, had opportunities for regional and transnational networking, which exposed students to professional geographers and environmentalists working for the United Nations, NGO's, Business and Government Agencies. Situational and experiential learning exposed students to public public and public-private sector networking.

Knowledge of professional, social and cultural demands of the world of work: Seventy-four percent of the students had no knowledge or had little knowledge of professional, social and cultural demands of the world of work before WRL. The result is congruent with observations made earlier that 61% of the students had not worked before; therefore, WRL was their first exposure to the world of work. After WRL, 93% of the students reported having good to excellent knowledge of professional, social and cultural demands of the world of work.

Knowledge of how to apply skills and knowledge learnt to practical situations: As per expectation, before WRL, 68% of the students had no knowledge of how to apply skills and knowledge learnt to practical situations. The finding is partly due to the fact that the department is under resourced, understaffed and suffers from financial and institutional pressure. After WRL, 81% of the students affirmed that WRL presented them with differential societal, organizational and environmental contexts, which gave them opportunities for meaningful, active and participatory learning. WRL also gave students an opportunity to apply Geography and Environmental Studies skills and knowledge to solve critical and real problems for business, government and NGO's.

Self-confidence and knowledge of skills needed to be effective in the workplace: Ninety-six percent of the students overwhelmingly rated WRL as having boosted their self-confidence. Over 50% of the students had opportunities to plan, organize and attend in house, national and/or international workshops and conferences. Nineteen percent of the students presented papers on diverse topics at such fora. One student who successfully presented a paper at an international conference had the paper published. Altogether, students reported

satisfaction with their roles and contributions during WRL. Students pointed out that, apart from doing mundane tasks, they were given challenging and outcome-oriented tasks. They also reported that their contributions were valued and appreciated. Due to the corroborative nature of the WRL environment and the practical nature of the activities that students were involved in, knowledge of skills needed to be effective in the work place increased as a result of WRL. Spatial thinking was also enhanced as a result of WRL.

Ability to network in a variety of situations: WRL improved students' communication and interpersonal skills. Partnerships were forged with the private and public sectors. The result is aptly demonstrated by members of the Environmental Society who, while on WRL networked with and obtained Z\$ 22 million from an NGO to cover students' research activities on selected themes.

Other spin-offs from WRL: Forty two percent of the students had job offers stemming directly from WRL conditional to their successful completion of the degree programme. Job offers were made by NGO's (25%) and quasi-government departments (17%). While students got these job offers through their own initiative, additional job offers (9) have come in through the department and more are expected. Fifteen percent of the students were offered vacation jobs. These developments are indicative of the potential of WRL to increase employability and job prospects of the students. The department also benefited from WRL through receipt of donations of resource materials and equipment. While on WRL, 38% of the students were paid monthly allowances of between Z\$ 5 000 – 200 000 by WRL cooperating organizations.

Utility of knowledge and skills gained through WRL: Students were asked to rate how knowledge and skills gained and developed while on WRL would be used in their academic and professional life. Results are shown in Fig. 3.



Fig. 3: Utility of knowledge and skills gained through WRL

Thirty eight percent of the students indicated that they will use the knowledge; skills gained and developed a lot. Fifty one percent of the students indicated that they will use a good amount of the knowledge; skills gained and developed. Eleven percent of the students indicated that they will use only a little of the knowledge; skills gained and developed.

Utility of knowledge and skills acquired on WRL is evident in students' choice of dissertation topics and research designs. The use of triangulation (multi method approach) in studied designs, in particular inclusion of qualitative methodology is heavily influenced by the nature of projects that students were involved in while on WRL.

Students' level of satisfaction with WRL: Fifty nine percent of the students indicated a high level of satisfaction with WRL. The group comprised 29% of students who received a monthly allowance for the duration of WRL and 30% of students who were not paid. In other words, 'satisfaction' was not defined in monetary terms only. Thirty-five percent of the students reported moderate satisfaction with WRL. The group included 26% of students who were not paid a monthly allowance. Only 6% of the students reported that they were not satisfied with WRL. Four percent and 2% of these students were attached to quasi-government and NGO's respectively. Students in this latter category were not paid a monthly allowance, which was the major cause of dissatisfaction. Students felt a deep sense of deprivation.

CONCLUSIONS

WRL has short and long term beneficial outcomes for students. WRL provided students with an opportunity to learn, consolidate, refine, apply and adapt Geography and Environmental Studies knowledge and skills to solve problems in a professional, well resourced and supportive learning environment which campus based learning may fail to achieve due to paucity of resources and high lecturer students ratios. The latter are a result of mass higher education. WRL engenders lifetime learning by entrusting students with the responsibility for their own learning. Knowledge and skills acquired on WRL are transferable to other contexts. Students are exposed to a wide range of career opportunities. WRL provides the necessary career orientation by acclimatizing students to the demands of the world of study.

The Geography and Environmental Studies Department has been able to use WRL to assess the ability of its course content to meet dynamic external challenges. The positive indication is critical in order to bolster subject robustness, viability and relevancy in a globalizing world. The discipline's intellectual base

should however, not be sacrificed due to internal and external demands to vocationalize Geography and Environmental Studies. Job-related skills are best taught by employers in the work place^[5,6]. A need arises to attain a balance between Geography and Environment oriented sub disciplines, in order not to peripheralize Geography sub disciplines, as the latter provides students with a basis for understanding the former.

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