ABSTRACT

The value of interactive reflective activities in the development of a universal orientation among service-learning students is explored. Psychology students participated in a service-learning module that incorporated various reflective activities. The hypothesis that exposure to reflective activities would result in change with regard to students' universal orientation, was confirmed. The most significant changes were seen in students who were involved in interactive reflective activities. These results support the value of dialogue and group interaction in students' development toward a universal orientation to life. Interactive reflection (embedded in the philosophy of human mediated constructivist learning and connected knowing) models the idea of interdependence and maximises students' perspectives of “we-ness”.

Keywords: reflection, service learning, group interaction, universal orientation, student development, higher education.

1. INTRODUCTION

Higher education institutions in the 21st century, particularly those in South Africa, face the challenge of globalisation, new knowledge societies and complex issues of social transformation and diversity (Department of Education, 1997; 2002; O'Brien, 2005). In response, institutions recognise the importance of the development of human beings with the ability of praxis, i.e. reflection and interaction with the world in order to transform it (Freire, 1968). Nationally developed generic outcomes prioritise competencies such as working effectively with others as a member of a group and demonstrating an understanding of the world as a set of related systems (Department of Education, 2002). From various spheres, the call for the importance of learning about being human is heard (Rubin, 2001). There is a need for holistic education with a vision of mind, spirit and heart (Aquino, 2005). True learning, i.e. creative, expressive, reflective, self-directed learning, must be the way of being (Clayton & Ash, 2004). In this regard, Von Kotze (2004) recommends that the academy should be stretched, and excellence redefined to include active engagement, a contribution to social justice, and life-world usefulness.

1 The financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at are those of the author and are not necessarily to be attributed to the NRF.
Various educators (Bringle & Hatcher, 2004; Clayton & Ash, 2004; Collier & Morgan, 2002; Connor-Greene, 2002; Eyler, 2000; McEwen, 1996; O'Brien, 2005) propose service learning as a pedagogy that can facilitate the social change, holistic development, and competencies mentioned above.

As far back as the 1970s, Chickering (1977:17) warned that the “door is slamming shut on the age of individualism and an era of interdependence is leaping out at us”. People today need to acknowledge and cope effectively with interdependence. A universal orientation to interpersonal relations accentuates similarities rather than differences between the self and others. This is based on the perception of self-other similarities, non-categorisation, self-other integration, a sense of oneness relatedness with others, the development of empathy and an acceptance of divergent views (Phillips & Ziller, 1997).

2. SERVICE LEARNING (SL) AND REFLECTION AS VEHICLES OF CHANGE

To reach Boyer’s vision of a scholarship of engagement (Boyer, 1996), SL has become the “engagement tool of choice” for educators (Zlotkowski, 2005:153). It is an “educational approach involving curriculum-based, credit-bearing learning experiences in which students (a) participate in contextualised, well-structured and organised service activities aimed at addressing identified service needs in a community, and (b) reflect on the service experiences in order to gain a deeper understanding of the linkage between curriculum content and community dynamics, as well as achieve personal growth and a sense of social responsibility...” (UFS, 2006:9-10). Various scholars have acknowledged the work of experiential learning theorists Dewey (1937; 1938) and Kolb (1984), Freireian ideas (e.g. praxis and the problem posing model of education) (Freire, 1968; 1973) and feminist epistemologies (such as views on connected knowing and situated learning) (Belenky, Clinchy, Goldberger & Tarule, 1997; Gilligan, 1982; Lave & Wenger, 1991) as cornerstones in the pedagogy of SL.

Reflection has been noted as the essential element that facilitates learning in SL (Eyler, 2000; Eyler & Giles, 1999; Kolb, 1984; Stacey, Rice & Langer, 2001; Zlotkowski, 1999). From Bringle and Hatcher’s (1999) definition of SL, it is clear that reflection assists in gaining a deeper understanding of module content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility. Schön, widely recognised in the field of reflective practice and learning systems, regards reflection as a continual interweaving of thinking and doing (Schön, 1990; 1991). This reciprocity is also clear from Freire’s term praxis and Dewey’s form of reflection as the backward and forward connection between prior and current experience.

3. INTERACTIVE REFLECTION

In this study, the use of reflection in an interactive dialogue will be explored further. Acknowledging reflection as a way of becoming aware and making meaning, it is postulated that the use of interactive reflection will reap the most benefits. Many scholars in the field of SL have expressed the value of reflection as a group process (Collier & Morgan, 2002; Eyler, 2002; Hatcher, Bringle & Muthiah, 2004; McDaniel, 1998; Rice & Stacey, 1997; Schensul, Berg & Brase, 2002).

Interactive reflection is embedded in the assumptions of constructivism (Schön, 1990), which emphasises how learning is mediated by interactions, social relations and language. Through dialogue, understanding is refined (Atherton, 2005). Echoing these ideas, Dewey, Lewin and Freire emphasise associated living, democracy in groups and the importance of connecting the I to the we as the true ingredients of education. Dewey (1938:48) mentions that “collateral learning” is sometimes much more important than the intended lesson itself. From a social constructivist perspective, Vygotsky reiterates the importance of co-operative and mediated learning, as well as authentically embedded knowledge (Schensul, Berg & Brase, 2002).

Feminist epistemologies emphasise that learning should be part of connected life and that learning is a social practice, based on participation in a community of practice (Clinchy, 2000). Group reflection that values thinking with (and not against) others can facilitate understanding. According to Noddings (1984:201), to “meet the other in caring” is the pinnacle of learning during service. This is of special importance in a multicultural classroom with diverse and sometimes sensitive and conflicting ideas. King (2004) and Skilton-Sylvester and Erwin (2000) refer to the importance of caring and sharing as a vehicle to enhance the border crossing (from the self to others) that is often needed during SL experiences.

From an African perspective, Waghid (2004a; 2004b) is of the opinion that an educated person is given to dialogue. In an African philosophy of education, social practice and listening to the voices of others are paramount. Waghid reiterates the importance of becoming a learning mediator, which implies critical reflective engagement with one's own and others' positions.
According to him, the key elements of an African university classroom include not only the socialisation of students with facts, knowledge, values and tradition, but also the initiation of a discourse and critical questioning processes. Furthermore, he emphasises the importance of critical reasoning and deliberation with others (Waghid, 2008; 2009). Students should be encouraged to challenge what they have been taught and enter into rival arguments. Through opportunities for systematic controversy, students form and reconsider their own views and evaluate presuppositions. Concurring with this, Francis and Hemson (2007) challenge educators in South Africa to consider greater reflexivity, discourse and social practice in their classrooms.

4. INTERACTIVE REFLECTION FROM A HUMAN DEVELOPMENT PERSPECTIVE

The developmental dynamics that students bring to the higher education sphere (such as developmental readiness and construction of personal meaning) can inform educational practice (McEwen, 1996; Sperling, et al., 2003). According to Dewey (Dworkin, 1959; Wirth, 1966) the appropriate stimuli should be chosen to ignite learners' inherent interest and instincts. Thus, educators should use the person's developmental stage as a “map” to order learning experiences.

For adolescents and young adults on their journey towards commitment in relativism (Perry, 1981), facing the challenges of finding an identity and intimacy (Erikson, 1980), interaction between individuals and their widening social radius, support and collaboration from peers, and finding meaning through others are paramount. Erikson (1980) states that identity formation is a complex, ongoing process in which individuals make judgements about the self in relation to socially constructed criteria; from an embedded identity to a differentiated and integrated identity. Acknowledging these ideas, higher education should be focused on opportunities that facilitate an understanding of the self in relation to a changing culture. Structured opportunities for reflection can provide the intellectual scaffolding for entering social contexts and exploring aspects of the self and others (Brandenberger, 1998). Also Kohlberg believed that education using social interaction, cognitive conflicts, democratic participation and taking ownership can advance moral reasoning (McDaniel, 1998).

When group reflection is done, students can learn with one another in a reciprocal and interactive way. Feelings-orientated, reflective discussions assist students in realising that their feelings are normal, which can foster group bonding and trust. Group members can respect one another's vulnerabilities and provide comfort and support. Reflective discussions that are more cognitively orientated provide students with the opportunity to share insights and compare and contrast alternative viewpoints and conflicting evidence, and can facilitate critical thinking and cognitive insight.
Through voicing their ideas, hearing others' experiences and success stories and finding collaborative solutions to problems, students gain a mutual understanding, recognise limitations in their own thinking and clarify their values. When the student is used as an expert during these discussions, it can enhance his or her leadership skills and confidence. Co-operative learning strategies also increase pro-social behaviour, and the presence of others increases one's motivation to perform well (Brandenberger, 1998; Collier & Morgan, 2002; Exley, 1998; Eyler, 2002; Hatcher, Bringle & Muthiah, 2004; McDaniel, 1998; Rice & Stacey, 1997; Schensul, Berg & Brase, 2002).

5. RESEARCH METHODOLOGY

The research aim was to investigate the effect of different kinds of reflective activities on the development of students enrolled in an SL module. The hypothesis was that exposure to reflective activities (the independent variable) would result in change with regard to different dependent variables, such as universal orientation, civic responsibility and cultural sensitivity. The amount of the change observed was expected to differ depending on the kind of reflection that students were exposed to.

Third- and fourth-year psychology students in the Human and Societal Dynamics, B Psych, and Psychology Honours programmes volunteered to take part in an SL module called *The Study Buddy project*. This sample of 75 students participated in essentially the same SL activities over a period of nine months.

The students were randomly assigned to three groups: two experimental groups and one control group. Experimental group 1 received opportunities for individual reflection (weekly reports with feedback from the lecturer), as well as structured interactive or group reflection opportunities (which entailed bi-weekly contact sessions where a diverse group of students interacted and conversed about their SL experiences). Experimental group 2 only received opportunities for individual reflection. The control group was not exposed to any structured reflective activities (although informal reflection between peers may have happened).

Informed consent for participating in the research project was obtained from all students. Furthermore, to ensure confidentiality, student numbers (and not names) were used to match pre- and post-test data. All participants were invited to individual feedback sessions after the completion of the study. With regard to the SL practices employed, students were sensitised regarding their responsibility towards the community, possible risks during their SL endeavours and the scope of practice guidelines prescribed by the Professional Board for Psychology, Health Professions Council of SA.
In following a pre-post test experimental design, data with regard to the specified variables were collected at the beginning and again at the end of the SL module by means of a short biographical questionnaire and various multi-item scales. Amongst others, the *Universal Orientation Scale* developed by Phillips and Ziller (1997) was utilised to measure non-prejudicial attitudes based on perceived selfother similarities and communal perspectives that minimise group inequality (Bringle, Phillips & Hudson, 2004).

Cronbach's -coefficient was used to determine the internal consistency of the different scales in the context of this study (see Table 1).

**Table 1: Cronbach's α-coefficients for the different scales**

<table>
<thead>
<tr>
<th>Instrument scale</th>
<th>α-coefficients Pre-test scales</th>
<th>α-coefficients Post-test scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civic responsibility</td>
<td>0.748</td>
<td>0.695</td>
</tr>
<tr>
<td>Universal orientation</td>
<td>0.518</td>
<td>0.746</td>
</tr>
<tr>
<td>Social dominance</td>
<td>0.844</td>
<td>0.812</td>
</tr>
<tr>
<td>Social competence</td>
<td>0.783</td>
<td>0.792</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>0.742</td>
<td>0.734</td>
</tr>
</tbody>
</table>

6. RESULTS AND DISCUSSION

Changes observed in the total research group

Table 2 summarises the mean and standard deviation scores of the dependent variables with regard to pre- and post-test scores as an indication of the changes observed in the total research group.
Table 2: Means and standard deviations of the scores for the total research group with regard to pre- and post-test scores on the dependent variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-test</th>
<th></th>
<th>Post-test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\bar{X}$</td>
<td>$s$</td>
<td>$\bar{X}$</td>
<td>$s$</td>
</tr>
<tr>
<td><strong>Civic responsibility</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest possible score 16</td>
<td>97.69</td>
<td>6.79</td>
<td>104.33</td>
<td>5.68</td>
</tr>
<tr>
<td>Lowest possible score 29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Universal orientation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest possible score 00</td>
<td>66.15</td>
<td>7.10</td>
<td>70.53</td>
<td>9.12</td>
</tr>
<tr>
<td>Lowest possible score 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social dominance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest possible score 112</td>
<td>34.68</td>
<td>12.70</td>
<td>35.55</td>
<td>12.20</td>
</tr>
<tr>
<td>Lowest possible score 16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social competence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest possible score 80</td>
<td>63.36</td>
<td>8.00</td>
<td>67.37</td>
<td>7.31</td>
</tr>
<tr>
<td>Lowest possible score 16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self-esteem</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest possible score 40</td>
<td>35.39</td>
<td>3.60</td>
<td>36.69</td>
<td>3.13</td>
</tr>
<tr>
<td>Lowest possible score 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hours</strong></td>
<td></td>
<td></td>
<td>53.81</td>
<td>26.01</td>
</tr>
</tbody>
</table>

Table 2 shows that, for most of the variables (except for social dominance), the pre-scores obtained by students were on the upper level of the continuum. In spite of the possible role of the ceiling effect, there is a tendency towards higher average scores in the post-tests (as expected). Changes in dependent groups (using difference scores) were tested for significance by means of $t$-tests.
From the results (see Table 3), it is evident that all scores for the dependent variables, except for social dominance, changed significantly (at the 1% level of significance). This can be ascribed to developmental effects and natural maturation, but possibly also to the effect of the SL activities. These changes correspond with other research findings in the field of SL (Eyler, Giles, Stenson & Gray, 2001). Because these results cannot be compared with an equivalent group that was not exposed to any SL activities, it is not possible to ascribe the development effect to SL (this was not the purpose of the study, however).

Table 3: \( t \)-tests for the total research group with regard to pre- and post-test scores on the different dependent variables

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>( t )-value</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civic responsibility</td>
<td>9.72**</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Universal orientation</td>
<td>4.03**</td>
<td>0.0001</td>
</tr>
<tr>
<td>Social dominance</td>
<td>0.78</td>
<td>0.4383</td>
</tr>
<tr>
<td>Social competence</td>
<td>6.64**</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>4.24**</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

\( ** p <= 0.01 \quad * p <= 0.05 \)

Although only 40 hours of work in the community were expected from students, the average reported number of hours spent in the community was 53.81. This indicates that students were motivated to take initiative.

Investigating between-group differences

The MANOVA testing differences with regard to the dependent variables for a) the three groups in general and b) Groups 1 and 2 (the two experimental groups) versus Group 3 (control group), are summarised in Table 4.

Table 4: MANOVA \( F \)-values for testing main effects and interactions

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>( F )-value</th>
<th>( \nu )</th>
<th>( P )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group (1,2,3)</td>
<td>5.08**</td>
<td>12.100</td>
<td>0.0001</td>
</tr>
<tr>
<td>Group (1+2) vs. (3)</td>
<td>1.73</td>
<td>6.68</td>
<td>0.1275</td>
</tr>
</tbody>
</table>

\( ** p <= 0.01 \quad * p <= 0.05 \)

Group 1 = Experimental 1; Group 2 = Experimental 2; Group 3 = Control

From Table 4, it is clear that significant differences (at the 1% level of significance) in the mean difference scores of the dependent variables exist for the three groups.
Table 5 summarises the results of the ANOVA tests that were done to determine which dependent variables showed significant differences (with the groups as independent variables).

**Table 5: Results of the ANOVA tests with group as independent variable**

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>F-value</th>
<th>v</th>
<th>p</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civic responsibility</td>
<td>6.80</td>
<td>6.28</td>
<td>6.84</td>
<td>0.07</td>
<td>2</td>
<td>0.9346</td>
<td></td>
</tr>
<tr>
<td>Universal orientation</td>
<td>12.00</td>
<td>0.68</td>
<td>0.48</td>
<td>17.61**</td>
<td>2</td>
<td>0.0001</td>
<td>0.70</td>
</tr>
<tr>
<td>Social dominance</td>
<td>2.00</td>
<td>-0.24</td>
<td>0.84</td>
<td>0.33</td>
<td>2</td>
<td>0.7201</td>
<td></td>
</tr>
<tr>
<td>Social competence</td>
<td>4.88</td>
<td>4.08</td>
<td>3.08</td>
<td>0.74</td>
<td>2</td>
<td>0.4794</td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>1.24</td>
<td>1.32</td>
<td>1.36</td>
<td>0.01</td>
<td>2</td>
<td>0.9876</td>
<td></td>
</tr>
<tr>
<td>Hours</td>
<td>72.52</td>
<td>44.00</td>
<td>44.92</td>
<td>12.69**</td>
<td>2</td>
<td>0.0001</td>
<td>0.59</td>
</tr>
</tbody>
</table>

**p <= 0.01  * p <= 0.05**

Group 1 = Experimental 1; Group 2 = Experimental 2; Group 3 = Control

From Table 5, it is clear that there are differences significant at the 1% level for two dependent variables, namely universal orientation and hours spent in the community. The effect sizes of both these results indicate large practical significance. According to the Scheffé procedure (to determine which of the three groups differed significantly from the others), Group 1 which received a combination of interactive (group) and individual reflective activities, differed significantly from the other two groups with regard to the two variables. Students in this group portrayed a greater shift towards a universal orientation and voluntarily committed more hours of service in the community than the other two groups.

These results support the value of interactive (group) reflection, as explicated above, as well as the importance of dialogue and group interaction. It is clear that, through dialogue, understanding is refined and development is facilitated. This finding is in accordance with the research of Connor-Greene (2002), who found that, amongst other things, group process, group discussion and interdependence enhance the value for students in an SL module.
It is believed that the potential value of working in groups, as proposed by various scholars (Collier & Morgan, 2002; Schensul, Berg & Brase, 2002, Simmons & Roberts-Weah, 2000) realised in this group of students. Through the sharing of multiple viewpoints, modelling and scaffolding, students gained insight into how context and background affect perceptions. They learned to think in terms of groups and not only as individuals. Furthermore, it is believed that the key elements of an African university classroom, such as discourse, critical questioning processes and opportunities for systematic controversy as proposed by Waghid (2004), were present in the interactive reflective processes in which this group was involved.

Although it was expected that individual reflection would also facilitate change (as in other research findings), this research did not find significant evidence for the role of individual reflection in facilitating development. It is clear that combining individual reflection with interactive group reflection proves to be a more effective educational practice.

7. SUMMARY AND CONCLUSION

This article provided an argument for how the implementation of certain learning and developmental principles can enhance educational practice in the field of SL and reflective practice. As Bradley (2003) states, these theories can serve as filters or lenses through which higher education activities can be designed and student learning and development can be facilitated.

This study supports the value of interactive reflection, dialogue and group interaction in the development of students toward a universal orientation to life. Conversation, dialogue, peer interaction and sharing experiences maximise students’ perspectives of “we-ness”. Especially for adolescents and young adults in a diverse society such as SA today, human-mediated constructivist learning models the idea of interdependence and equips students with the competence needed in today’s world.

8. REFERENCES


EYLER, J.S. 2000. What do we most need to know about the impact of service-learning on student learning? Michigan Journal of Community Service Learning, Special Issue: 1117.


