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ORIGINAL PAPER

# Research and Reflection: Potential Impact on the Professional Development of Undergraduate Occupational Therapy Students

**Sanet H. J. Du Toit · Annette C. Wilkinson**



**Abstract** In occupational therapy education in South Africa, community service (CS) focuses learning opportunities during fieldwork placements. CS therefore enabled the researcher to utilise successive small scale research projects to guide learning of students during fieldwork while simultaneously developing the occupational therapy service at a residential care facility. This community setting provided a powerful environment through which research, in combination with opportunities for reflection, contributed to nurturing skills needed by these future health professionals. A technical action research (AR) approach incorporated AR cycles and opportunities for structured reflection. Therefore situations were created for the students to embrace experiential learning. Experiential learning in the form of anticipatory reflection, reflection-in-action, reflection on reflection and retrospective reflection impacted on the quality of the students' work. Besides encouraging unique leaning opportunities for students when engaging in research during their fieldwork placement, engagement in AR cycles simultaneously improved service delivery to residents in the facility. Key benefits of this investigation were that fieldwork education utilising AR cycles within a CS situation promoted students to identify voids in their theoretical background as well as practice skills; to apply reflective practice that could contribute to their personal and professional development; and to utilize learning opportunities optimally. Despite positive gains showed by this study, the role of power relations between the researcher as fieldwork educator and the students prohibited the AR cycles from being more emancipatory in nature and should be addressed in follow-up studies.

**Keywords** Action research cycle approach · Community service · Occupational therapy undergraduate training · Small scale research projects · Experiential learning

S. H. J. Du Toit (✉)
Department Occupational Therapy (G44), School for Allied Health Professions, Faculty of Health Sciences, University of the Free State, PO Box 339, Bloemfontein 9300, South Africa
e-mail: dutoitsh@ufs.ac.za

A. C. Wilkinson
Centre for Higher Education Studies and Development, University of the Free State, Bloemfontein, South Africa

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## Introduction

Biggs (2006: 13) summarises the link between professional development and undergraduate learning opportunities very adequately as:

> Learning is… a way of interacting with the world. As we learn, our concepts of phenomena change, and we see the world differently. The acquisition of information itself does not bring about such change, but the way we structure that information and think with it does. Thus, education is about conceptual change, not just the acquisition of information.

Challenged by views like the above, the researcher (the first author) working as both a fieldwork educator (at a residential care facility) and academic staff member (of the Department of Occupational Therapy at the University of the Free State, UFS), had to reconsider possible vehicles for conceptual change during student training. As the UFS identified fieldwork education as a sub-category for integrating community service (CS) with academic work (Ellis and Erasmus 2006), this opportunity for civic engagement included "*teaching, research and service in and with the community*"—which are regarded as key functions of higher education. (Bringle and Hatcher 2005: 25).

According to Lorenzo et al. (2006), CS provides the real-life situations necessary for fieldwork education in specific community settings to equip students with knowledge, theory and clinical experience, and has brought new dimensions to their understanding of practice. The definition of Erasmus (2005: 6) of CS learning as a specific teaching methodology provided further impetus for the intended project, namely: … *a particular type of action learning within the field of experiential education, which incorporates community service, seeking balance between student learning and service to the community*.

This definition identifies features of experiential education as noted by Kolb (1984) that incorporates action learning and/or experiential learning as it applies to all learning through experience. Therefore, in addition to the scope of fieldwork education supported by a CS focus, the researcher aimed to structure information by engaging students in successive small scale research projects. These small scale research projects were an integral part of activities students were required to engage in during their final year of training (KAB409, fieldwork placement module guide of the Department of Occupational therapy, UFS).

From an educational perspective specifically, Lorenzo et al. (2006) emphasise that CS also allows students the opportunity to develop an awareness of their own values and perceptions due to their engagement in more diverse situations. Learning therefore occurs on both a personal and professional level.

A central concept associated with experiential learning and this combined learning process (on personal and professional levels) is reflective practice. According to Bringle and Hatcher (2005), it is in essence the reflective activities associated with CS that would ensure the actual thinking within the structure provided. In the Australian Journal of Occupational Therapy, the authors (Du Toit et al. 2010) highlighted the practical use of an action research (AR) cycle approach in the clinical context that encouraged student engagement in successive small scale research projects while simultaneously generating evidence for practice. This formalised approach guiding thoughts and actions assisted to develop a process model for guiding evidence-based practice during fieldwork education. However, in this article the authors focus specifically on how experiential learning contributed to personal and professional development when CS featured as part of supporting

fieldwork education). Experiential learning was therefore employed in ongoing AR cycles to promote student engagement in research-related activities.

## Background

The researcher was approached by a residential care facility for elderly persons to develop an occupational therapy programme on a consultant basis. This opportunity held several benefits: On the one hand, the UFS would gain from this new service as it provided a fieldwork education opportunity for final year occupational therapy students. On the other hand, the 189-bed residential care facility would benefit from input provided by these students supplementing the limited workforce of the occupational therapy service.

Development of a new service, involving students who were expected to participate in research-related activities, prompted the researcher to consider the value of AR cycles. French et al. (2001: 248) indicate that "*action research is directed at implementing a change in one's own practice and self-critically evaluating its effects*". Firstly, AR could therefore promote the use of research to inform practice (or service development at the residential care facility). Secondly, AR cycles would encourage a cost-effective way to develop a new service while ensuring that students gain clinical skills expected by the UFS for their final year of training. In this particular instance, the AR cycles guided the researcher as these students' clinical supervisor to compile small scale research projects (mostly for service development) and compulsory reflection opportunities (mostly for student learning).

Consequently, students could address the quality of life of the residents living in the dementia care unit of this facility through executing small scale research projects. In this CS context, these students endeavoured to gain practical abilities as both future clinicians and novice researchers. Additionally, AR cycles provided both the students and their supervisor directly with individual learning that benefitted the residential care facility and the residents.

## Clarifying Contexts Supporting the Action Research Cycles

### Role Players

Four sets of role players should be acknowledged. This study specifically had an impact on the elderly residents as recipients of the occupational therapy service and the residential care facility as the host organisation. The residents and the residential care facility could be viewed as the community, or "*specific, collective interest group*" (Ellis and Erasmus 2006: 8) for the context of these AR cycles. The planning and establishment of multisensory treatment areas for the identified community, as well as developing person-specific programmes for residents to utilise these areas, were aimed at addressing the needs of this group. The AR cycles therefore allowed not only for the needs of the specific community to be addressed, but also created the opportunity for the researcher and occupational therapy students to engage in solution-driven community-orientated research (Ellis and Erasmus 2006).

However, the focus of this article is on the 12 occupational therapy students involved over a period of 32 months. The AR cycles these students and the researcher engaged in, created opportunities for experiential learning during research and reflection activities that

potentially could impact on the undergraduate occupational therapy students' professional development.

The small scale research projects were the common denominator that connected the learning context for the students with the quality of the service for the residents on the dementia ward. The researcher issued assignments for the projects upon the service requirements that would impact on the quality of life of the residents, counterbalanced by the observed potential to develop knowledge, attitude and skills of occupational therapy students engaged in these research projects.

## Potential Learning Opportunities Provided by the Fieldwork Education Environment

Two important paradigmatic issues to consider when clarifying the context for this study are that the AR design acknowledges that *multiple realties exist* and *research and intervention coexist* (Maree 2009: 130). Therefore, roles as researcher, supervising clinician and consultant occupational therapist need clarification. Within these multiple realities fostered by an AR cycle approach, the researcher experienced that engagement in AR that incorporated experiential learning encouraged the students to learn from experience (Dick 1997). The illustration in Fig. 1 provides an overview of the different functions and intertwined roles and is interpreted as follows:

- As the occupational therapy practitioner, the researcher endeavoured to develop a quality service for her clients, in this case the residents of the dementia unit of elderly care facility.
- As the supervising clinician, her focus was on promoting the attitude and skill of the students for accessing, applying and generating research.
- As a researcher, she attempted to engage in an organised method that would encourage students to learn from their experience and reflections.

These roles were consolidated by all these attempts to promote the professional development of the undergraduate occupational therapy students while on placement at the residential care facility (i.e. engaging in AR cycles for two successive years).

The fieldwork placement environment therefore facilitated specific experiential learning opportunities for the students and was guided by a comprehensive practical protocol. The social intent of improving the occupational therapy service to the benefit of the residents impacted directly on the way in which actions were taken. Besides involvement in the small scale research projects, reflection was encouraged in most of the expected work activities performed by the students (see Table 1 for a summary).

In order to explain how various forms of reflection were integrated during fieldwork education at the residential care facility, Kinsella's (2000) identification of different kinds of reflection was employed. She distinguished between:

- anticipatory reflection—the anticipation of a specific situation or planning of a treatment session;
- reflection-in-action—taking place in the midst of professional activity; and
- retrospective reflection—evaluating what had occurred in practice or a deeper reflection on many domains.

During the induction week, students were expected to identify what they wanted to learn during their fieldwork education period in the area. This information, in addition to identifying areas they were most concerned about (as it could possibly impact on their effective functioning in the area), was noted in a learning contract. Students were also

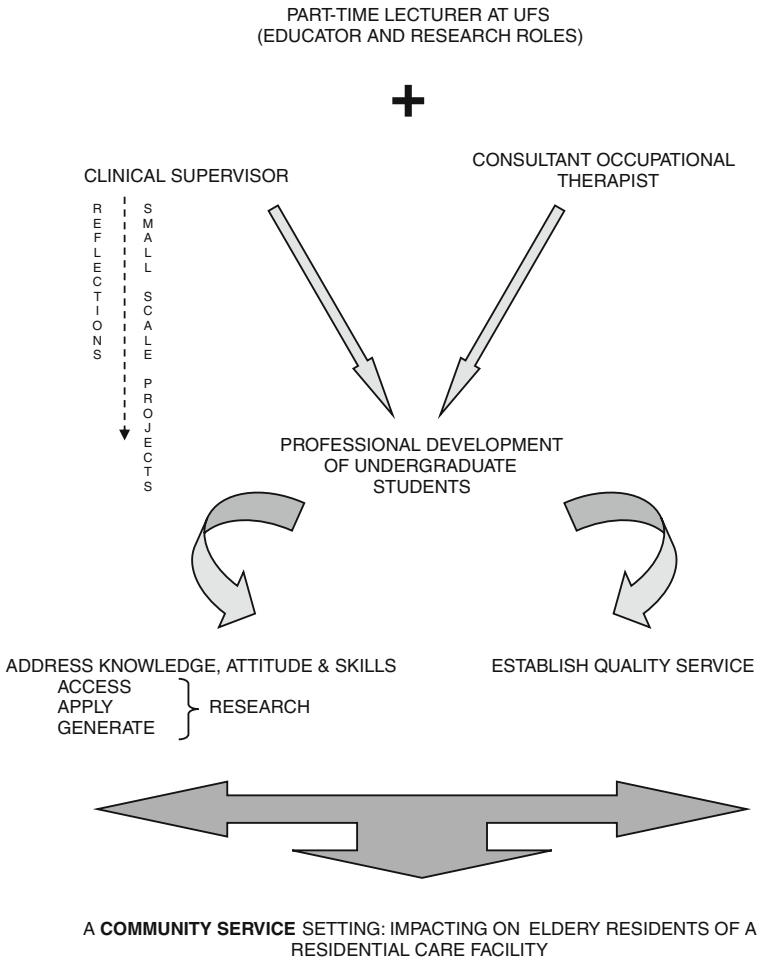


**Fig. 1** Position of the researcher as occupational therapist and clinical supervisor of undergraduate occupational therapy students

expected to initially complete a structured reflection for each treatment session they performed, as the supervising clinician could only attend one treatment session per week. These reflections were submitted on a weekly basis so that the supervisor could make comments to encourage further learning. This form of reflection was replaced by a daily reflection sheet as soon as the students were competent in assessing their own input.

Additionally, a mid-placement critical analysis, encouraging the students to identify their own as well as the area's strengths and weaknesses, was completed. A final placement reflection, in combination with a post-project reflection, endeavoured to promote a focus on all the learning opportunities offered by the area. This structured format for reflection was based on questions directing students to think about what went well, what did not go well and what they would have done differently if another opportunity had been available. AR with embedded experiential learning opportunities was therefore inherent to the *modus operandi* followed by the researcher as clinical supervisor of the area.

**Table 1** Reflection formats utilised

| Type of reflection | When used | Summary of questions asked |
|---|---|---|
| Learning contract (anticipatory reflection) | Induction week | Expectations for placement<br>Achievements envisaged<br>Identified uncertainties |
| Treatment session reflection (retrospective reflection) | Daily for first week | Were aims reached (plus motivation)<br>Appropriateness for residents (plus motivation)<br>Possible future adaptations |
| Daily reflection on all activities involved in (reflection-in-action) | From second week onwards | What went well (plus motivation)<br>What would be done differently in future (plus motivation) |
| Mid-placement reflection (retrospective reflection) | Halfway during placement—reflect on self and area | Identified strengths, weaknesses, opportunities and threats (SWOT) |
| Final placement reflection (retrospective reflection) | Last week of placement | What went well (plus motivation)<br>What could have been done differently (plus motivation)<br>What was learnt |
| Post-project reflection (retrospective reflection) | After project presentation—once final marks were allocated (all assessment completed by then) | Overall experience due to participation in research<br>What would have aided orientation to assignment<br>What was most surprising about involvement in research project<br>What was difficult/an obstacle<br>What would be done differently if another opportunity was given<br>Identify long-term value of the project |

## Methodology

In this study a qualitative design (incorporating various AR cycles), involved document reviews and a single case study. Various authors are in agreement that the cyclical nature of the process followed in AR cycles encourages improved practice (Tripp 2003; Dick 2000; Zuber-Skerritt 2002a; McNiff and Whitehead 2006). Therefore the continual engagement in a "*plan–act–describe–review*" cycle encouraged the researcher to follow a disciplined, systematic process to investigate her own practice while also encouraging reflection by students during their fieldwork education placement.

Maree (2009) specifies that technical AR allows the researcher to take on the role of outside expert and reflect on both the AR and experiential learning situations provided for the students. Zuber-Skerritt (2001) advised that this type of a technical inquiry, based mostly on a critical and self-critical attitude, can lead to a deeper interpretation of the AR cycles. Consequently, the researcher's interpretation of events and manifestations of professional development was supported by choosing data selectively from the following:

- Structured reflections completed by all 12 students after engagement in the small scale research projects.
- A follow-up questionnaire to eight students in the year following their involvement in the successive small scale research projects. This questionnaire provided them with an opportunity to reflect on how skills gained due to participation in a small scale research project as a final year student, could have promoted their professional development.
- A case study of one small scale research project was specifically utilised as an example to discuss the impact of research and development on the professional development of a specific student.
- Data from the researcher's notations in her reflective journal was also included as it incorporated interpretations and introspection she acknowledged as her own personal context. The reseacher endeavoured (in accordance with Braham 1995) to analyse and question this information without judging.

Content analyses of documents, as specified in Table 1, were conducted and provided useful information for interpreting the AR cycle approach followed. Therefore, a more holistic approach to the analysis of data was pursued to produce an integrated view of all the findings. Due to the wide range of information included, Anderson, Herr and Nihien's criteria for validity (in Mills 2001) were incorporated in pursuit of rigour (see Table 2). These refer to democratic, outcome, process, catalytic and dialogic validity. Specific use of these strategies is incorporated in the key findings section.

When looking at the level of participation of the role players, Dick (2002) provides an approach to distinguish between various groups of stakeholders. A comprehensive sample of all 12 the occupational therapy students on fieldwork placement at the care facility

**Table 2** Verification strategies promoting reliability and validity of an action research cycle approach

| Aspect | Promoted rigour | Deterred rigour |
|---|---|---|
| Democratic validity | Feedback from more than one situation contributed to triangulation of data | The personal context of the researcher, the fact that she viewed the profession of occupational therapy as her calling, directed her investigation and coloured her interpretation of findings |
| Outcome validity | Data from an extended period of 3 years of engagement in an action research cycle confirmed and supported one another | Action research is an ongoing process and insights would only be verified by future research cycles |
| Process validity | Towards the end of the first year, the researcher proceeded from a technical towards a more practical mode of inquiry where she could encourage participation and reflection by the participants (Carr and Kemmis, in Zuber-Skerritt 2001) | Technical and practical modes of inquiry rather than an emancipatory approach were followed by the researcher and resulted in a less critical inquiry—data are therefore at risk of being more superficial |
| Catalytic validity | Constant checking and re-checking of findings; comparing findings with literature | No recommendations have been made to alter the theoretical base of undergraduate training at the UFS in order to incorporate specific modules on spirituality and worldview |
| Dialogic validity | Verification strategies included member-checking where students previously involved in the action research process were invited to read the researcher's interpretations and make comments | Hawthorne effect—even though ex-students were no longer enrolled at the UFS, the previous power relationship between them and the researcher could have influenced the quality of the member check |

comprised the group of direct stakeholders. The indirect stakeholders were the residents on the dementia care ward who were purposively sampled for involvement in specific projects (Dick 2002).

Ethical approval for the research was granted by the Research Committee of the Faculty of Humanities, UFS. Permission was also obtained from the management of the residential care facility, the guardians of the 13 residents involved, as well as the final year occupational therapy students who participated in the study.

## Key Findings

### Small Scale Research Project Development

The small scale research projects conducted successively during the period of February 2005 to October of 2007 covered a variety of topics. As change facilitated understanding during the process of project development, data directly related to the contents of the projects were included in the findings and discussion.

In order to establish a frame of reference for the reader, themes for the first 16 projects generated by the AR cycles in the above-mentioned period are summarised below. These successive projects focussed on:

- acquiring extensive background research on residents
  - Project 12: Evaluation of selected residents with PAL and compilation of background questionnaire.
  - Project 13: Processing of data generated by Project 11 and comparison with findings from Project 12.

- establishing various multisensory treatment environments
  - Project 1: Design of a multi-sensory room (involving the community).
  - Project 7: Critical evaluation of two previous funding submissions and suggestions for adaptations.
  - Project 8: Critical evaluation of updated submission and addition of an outside area.
  - Project 10: Critical evaluation of documentation for sponsors and compilation of a DVD to accompany it.

- exposing residents to different treatment situations
  - Project 9: Design of multi-sensory passage with reminiscence theme.

- compiling person-specific treatment programmes for identified individuals on the ward
  - Project 14: Compilation of four person-specific treatment programmes.

- determining if treatment programmes implemented were effective
  - Project 2: Compilation of indicators of selected residents' current functional abilities.

- Project 3: Critical comparison of standardised assessment with compiled list of indicators.
- Project 4: Critical evaluation of Projects 2 and 3—adapt and apply form.
- Project 6: Critical evaluation of Projects 2 and 3—adapt and apply form.
- Project 11: Selection of 10 residents to evaluate according to M.O.H.O.S.T. (Model of Human Occupation Screening Tool) and observation grid

– evaluating the effect of reflective practice on the students' professional development

- Project 15: Evaluation of reflective practice process encouraged as to increase research.
- Project 16: Investigation of action learning by implementing a reflective journal

The successive small scale research project development was directed by the AR cycles that both the researcher and the students engaged in. These AR cycles are portrayed in Fig. 2 as a figure eight model, based on the work of both Tripp (2003) and Zuber-Skerritt (2002a). The upper circle delineates the processes that assisted the clinical supervisor as researcher to contribute to the promotion of professional development of the students by:

- Step 1

  (a) planning small scale projects to develop the service;
  (b) planning when and how structured reflections would assist with student development during fieldwork education exposure;

- Step 2

  (a) giving successive assignments to students;
  (b) providing opportunities for structured reflection and feedback;

- Step 8

  (a) and (b) observing how project execution and participation in structured reflection opportunities impacted on the students as well as the residents; and

- Step 9

  (a) and (b) reflecting on what would ensure better learning opportunities for students while also addressing the residents' quality of life more effectively with future projects.

While engaging in this process, the researcher exposed the students to AR cycles as an inherent part of the process for executing their small scale research projects (in steps 3–7 of the bottom circle). The small scale research projects also potentially provided the opportunity for students to engage in all three identified forms of reflection (see Fig. 2). At the outset, the assignment-facilitated anticipatory reflection (step 3) and engagement in the project allowed for reflection-in-action (step 4). Retrospective reflection (step 5) assisted with preparation for presenting the project to the supervising clinician and an examiner from the UFS. After the completion and presentation of the project, a structured questionnaire assisted the student with further retrospective reflection (step 6).

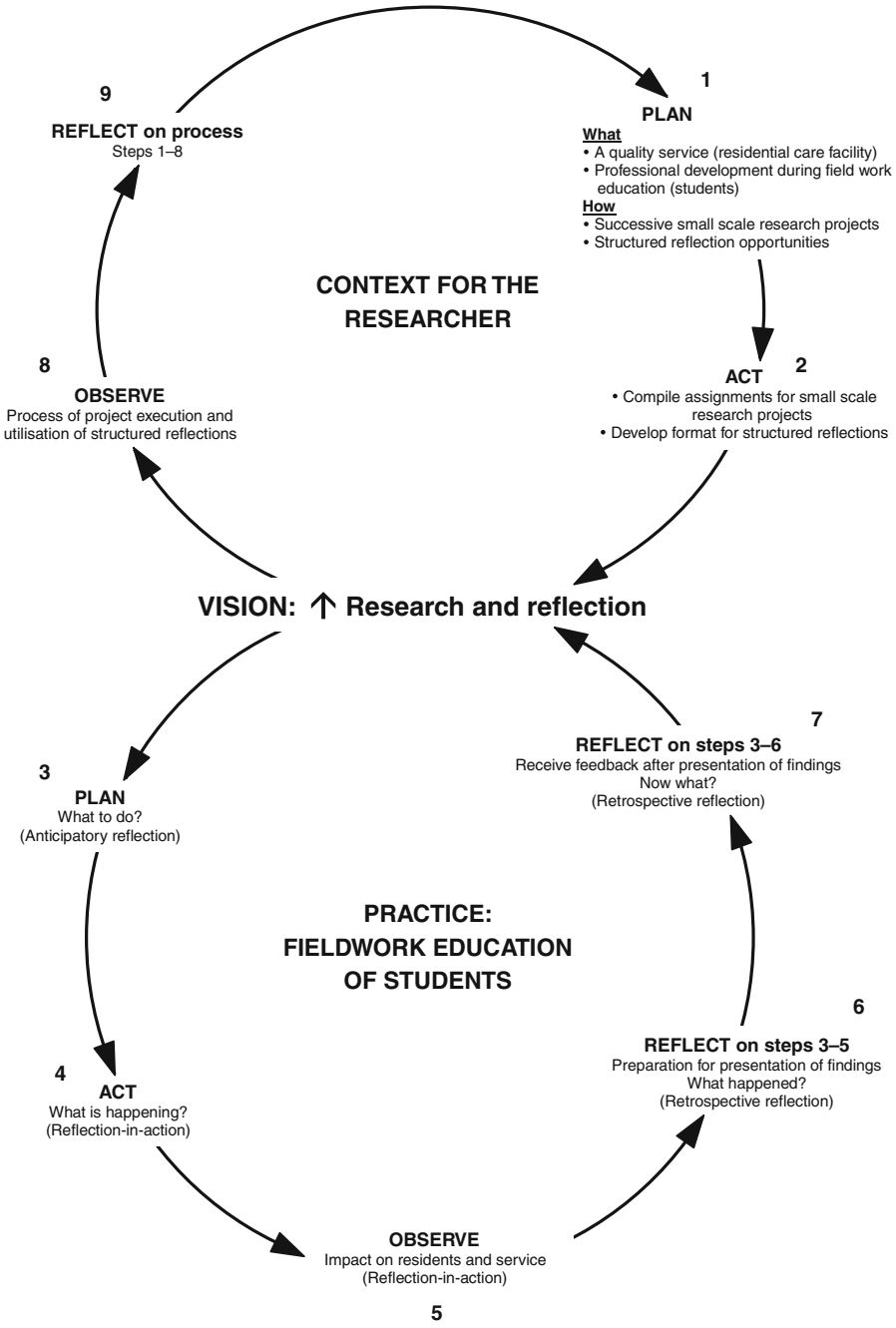


**Fig. 2** Action research cycles promoting reflection and research

Although the process guiding actions for both the students and the clinical supervisor were similar, their participation required different levels of involvement, as shown in Fig. 2.

The AR process of steps 7 and 8 (the researcher's observation and reflection) of the research cycles illustrated in Fig. 2 guided the researcher in considering the experiential learning opportunities provided for the students. Consideration was given to the potential contributions of anticipatory reflection, reflection-in-action, retrospective reflection and reflection on reflection for professional development.

### Anticipatory Reflection

Trends denoted in the learning contract documents revealed that the students' expectations centred on learning how to deal with elderly persons. This included the endeavour to utilise the opportunity provided by fieldwork education for applying specific techniques (i.e. sensory stimulation, reminiscence and validation) to promote activity participation of the elderly residents, for example:

> I have not worked with elderly clients and therefore, I would like to gain skills relating to treatment in such an area. (July 2005)

On the contrary, some students conveyed doubt in their own abilities and acknowledged their lack of skills for working with elderly persons, for example:

> Will I be able to complete all these unfamiliar forms? Will I understand my mini-research project assignment and execute it correctly with techniques I have not engaged in before…. (September 2006)

The researcher found it interesting that the prospect of engaging in a small scale research project was seldom mentioned by students. They were in the habit of discussing their allotted fieldwork education areas with one another. As this placement at the dementia ward was the only facility that involved students in successive research projects for their final placement assessment, some acknowledgement of this fact was expected. The omission of this aspect as a concern (by the students themselves), could indicate that students were comfortable with the idea. There might, however, be a much more practical explanation. When completing the learning contract, the summative assessment was usually 6 weeks away and may therefore merely not have been a pressing issue for the students.

### Reflection-in-action

Critical reflection on their own day-to-day functioning indicated that students gained specific insight into themselves and their own personal reactions. They started acknowledging their own inadequacies, for example:

> I am not always patient enough! I get demotivated when residents do not want to get involved with the group activities. (August 2005)

Critical reflection on the facility as an area for fieldwork education revealed a recurring weakness in that there was no permanent occupational therapist employed at the facility. Nevertheless, a constant strength was the support from the staff and the consulting occupational therapist. It therefore appeared as if students valued the support structure provided, but could envisage the potential of a full-time therapist in the area. Other reflections focused on activities in the day-to-day functioning of the student in the clinical area, for example:

> I have the opportunity to initiate things that are bigger than I am; for example, the games day, Special Care Unit and research project. (October 2006)

The researcher also noted that students seemed to procrastinate in the execution of their small scale research projects. This happened although students received their research assignment at the beginning of their second week of a 6-week period at the residential care facility—directly after they had completed their induction and orientation. The majority of activities in preparation for the assignment presentation appeared to focus on the week or 10 days prior to the set assessment date.

## Retrospective Reflection

Retrospective reflection initially focused on reflections noted on the final reflection form that students handed in on the day of the conclusive assessment. Furthermore, the data from the post-project presentation reflection form were also considered.

Findings indicated that students' final reflections supported many of the comments they made in their daily reflections. Recurrent themes of what they mostly perceived they could have done differently were involving more residents in group treatment sessions, and being more skilled in the handling of the residents.

In hindsight, students appeared to realise what conduct would have been more appropriate for specific circumstances. This included simple tactics for involving residents who seemed opposed to participation in group activities, for example:

> … incidental involvement is a very important component in the treatment of the elderly. (August 2005)

Students found that they were more successful when involving residents in this way, rather than creating an opportunity for residents to immediately decline involvement when invitations to join a group were proposed.

However, when individual gains mentioned by students were considered, each student identified skills gained that related to specific requirements associated with their own small scale research project assignment. Therefore, specific assignments and the related contents of projects apparently affected professional skills gained during the placement. An example is the use of standardised assessment tools like the M.O.H.O.S.T. (in Project 11) that was specified for use in four different projects. This tool was not used in any of the other fieldwork education areas since it is most appropriate for clients whose functional abilities are limited (such as the dementia care residents). One student stated:

> I learned more about the M.O.H.O.S.T. and could apply it practically which was not the case before… (March 2006)

After the presentation of their research projects, the concluding opportunity for deep reflection was provided through a semi-structured questionnaire in the post-project presentation reflection form. Students were given a few days (usually three to four) to consider their experience before they handed in the form. Once again, the practical approach of the students during their fieldwork education at the residential care facility was evident from the comments in the post-project reflections. Students realised that when executing a research project, the following aspects were of the utmost importance:

- "Planning is very important and a timetable for execution should be used". (May 2005);
- "Be practical, be specific". (May 2005) (interpreted by the researcher as being realistic about what one can accomplish in the given time for project execution or what would be appropriate for the dementia care unit);
- "Ask, ask and ask!" (May 2006) (interpreted by the researcher as confirming correct interpretation of the assignment); and
- "Be positive!" (September 2005).

Overall—besides listing gains—practical capabilities, volition as a positive attribute to professionalism and accomplishment re-emerged as a theme in retrospective reflection. The students' perceptions of the long-term value of ongoing projects appeared to be linked with maintaining a positive attitude and motivation to contribute to part of the process for service development at the residential care facility. The reflection forms corroborated an appreciation for available information generated by previously completed projects, for example:

> The previous projects done were a big help in directing me. The project satchel* is a very good resource. (August 2005) (* a special file containing all completed projects).

## Retrospective Reflection Upon Reflection Opportunities

The AR cycle approach supports a process where reflection on experiences leads to an abstract conceptualisation for newly found understanding (Roberts 2002). This conceptual change due to learning then encourages new ideas for future experimentation. The researcher therefore sent a follow-up questionnaire to eight stakeholders involved in the first eight small scale projects the year after they completed their studies. This aspect of the AR cycles also contributed to its democratic and dialogic validity (see Table 2).

A few months after this process had been completed, a student involved in a small scale research project (Project 15) also decided to use a questionnaire to gain information for her research project. Her assignment indicated that she had to critically analyse and investigate the methods of reflection encouraged by the fieldwork education area. Her research population therefore also included the eight ex-students involved in the researcher's follow-up survey.

This presented a unique situation, as information from both questionnaires could be compared and contrasted. The fact that one questionnaire was administered by a peer rather than by the researcher, had specific significance. Even though the ex-students were not in an academic milieu any more, their responses might still have been influenced by the perceived power relationship between clinical supervisor and student. Answers to inquiries by a peer might have been more open and even more comprehensive since they could identify with the situation the student was in, based on their own research project experience.

The students' feedback to their peer in connection with positive and negative aspects, as well as recommendations for the structured reflection formats employed, were refreshingly direct and useful. All eight participants acknowledged the effort, time and energy associated with reflection. One of the students was honest enough to admit that "*It is a lot of writing and thinking and at the end of the day, I just did not feel like completing it*".

Positive aspects associated with the use of the reflection forms related to the connection found between the mid-way analysis and the final reflection. Participants reported that it was a viable way to observe growth and professional development. Furthermore, as the critical analysis was completed halfway during the placement, it gave students the

opportunity to address the negative aspects (or those aspects in need of attention) that they had identified. Two noteworthy comments were:

> "It gives you an idea of where you are and the opportunity for improvement". (with reference to the halfway reflection); and
> "It is very good especially if you compare the halfway reflection with the end-of-placement reflection". (with reference to the end-of-placement reflection).

The post-project reflection was perceived as very positive because it occurred after the completion of the small scale research project and assisted to reduce the impact of potential power relations. The students indicated they could be more objective about their experience as completion of the form was not included as a task they were assessed on. Recommendations made included the following:

- "Perhaps a section for suggestions for future students".
- "Make it more specific for general experiences during the day—a diary".

A diagram compiled by one of the participants suggested re-organising the final reflection. This could be achieved by structuring the three reflective questions, with specific reference to individual and group treatments, programme development and the research project, rather than leaving it up to the student's discretion on which aspects she would like to focus.

Only one of the eight students specified gaining skills in reflective practice. Her comment on the most surprising aspect during the implementation of her project was "… *of how much value the things are that we* (i.e. the students on placement) *perceive as a schlep**". (* Informal term used locally by students to describe work or responsibilities often regarded as boring and requiring an unjustified amount of effort.) She further indicated that reflection had a positive effect on professional practice, saying "*I learnt a lot about my own professional personal development*".

## Taking Personal Responsibility for Development

It was evident that different experiences during the small scale research project execution influenced the personal and professional development of the students. The extent to which the experiential learning component impacted on their ability to reflect could be portrayed most effectively by the student who engaged in Project 16. In addition to considering the forms of reflection utilised, this assignment required the student to keep a reflective journal in which to note experiences and development while canvassing for volunteers to implement the person-specific treatment programmes compiled for residents of the dementia care unit. In an attempt to understand the link between personal and professional development with learning and reflection, this student visually portrayed her journey via a reflective journal. She had to explain her choices for the visual portrayal which served as the demonstration aspect for her small scale research project.

Her first attempt resulted in a linear diagram (see Fig. 3) and she had difficulty in verbalising her own understanding of her development. It became clear when considering Tripp's (2003) interpretation of reflective practice, that this student did engage in the cycle of a "*plan–act–describe–review*" sequence, but the process was dominated by thoughtful *action*. It was interesting to see how she struggled to focus on learning experiences, but rather directed her reflection towards actions associated with duties she performed on placement. For example, when she was unsuccessful in canvassing for volunteers she focused her reflection on what she should do ("*Show the person an example of a person-*

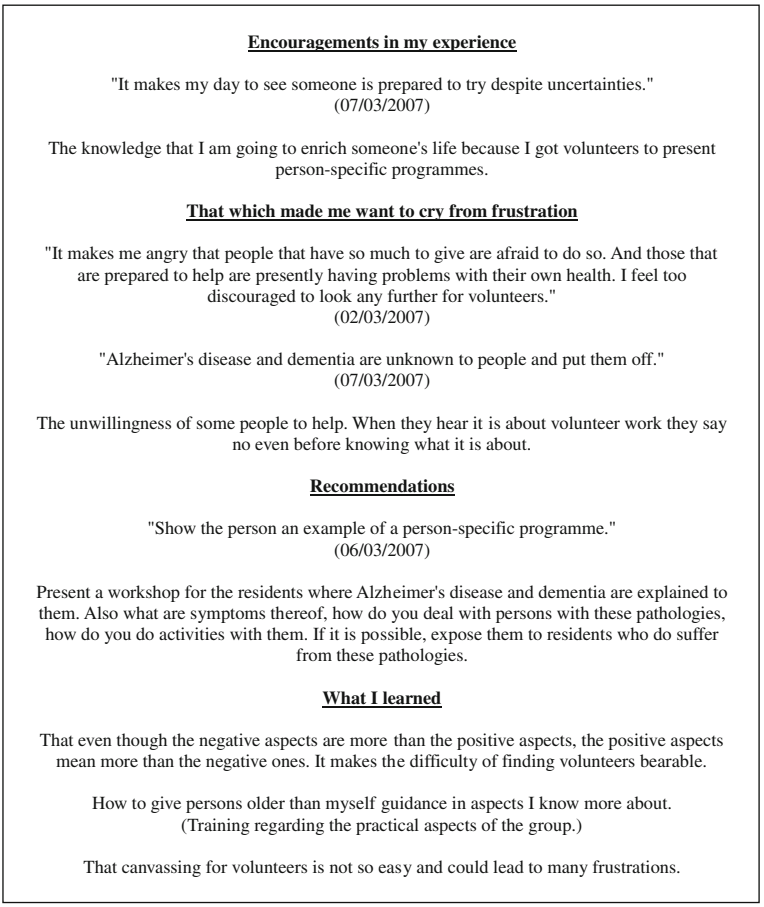


**Fig. 3** Poster content used for demonstration aspect during presentation of Project 15

*specific programme*") rather than how it made her feel. It was only after receiving feedback from her clinical supervisor that she could differentiate between personal and professional development gained due to reflective practice. A prime example was a comment relating to skills gained from facilitating a non-directive therapy session:

> I now have a better idea of how a session in the multisensory room should proceed. It is not easy to relinquish control.

This student realised that she initially could not focus on her learning experiences because she feared that her personal development was not as valuable as the contributions she could make towards implementing person-specific treatment programmes for the residents. When she was encouraged and given a second opportunity to search for and visually portray her meaningful learning experiences as recorded in her reflective journal, it resulted in the diagram shown in Fig. 4.

The researcher was impressed by the boldness of the student in portraying a journey that originated at a place where she was aware of her lack of skills for what lay ahead

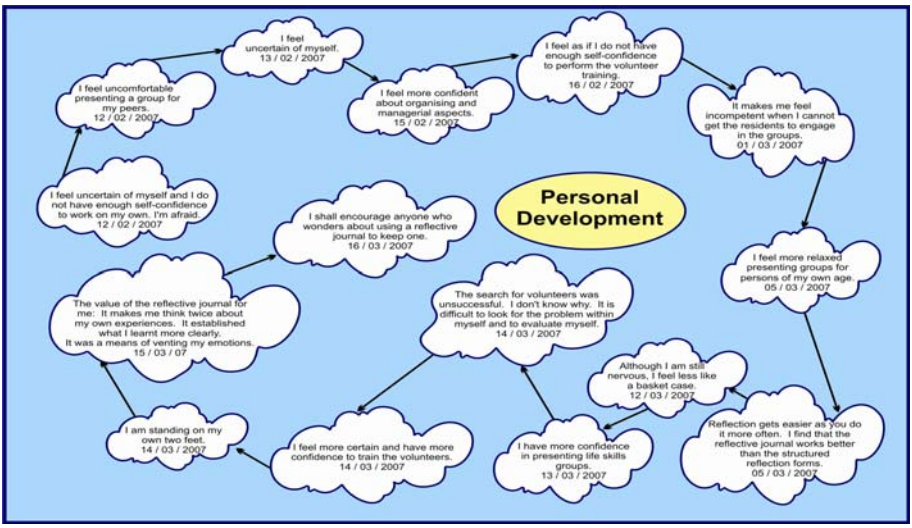


**Fig. 4** Poster content of reflective journal experiences during Project 15 portrayed after feedback

("*I feel uncertain of myself and do not think I have enough self-confidence to work on my own. I'm afraid*"). Reflection aided her in identifying what skills she had gained over this period of 5 weeks ("*I am standing on my own two feet*"). Regrettably, she was still unable to pinpoint whether the one aim she identified but was not able to meet (in other words, the inability to canvass for and establish volunteers), might be due to personal attributes. It might also be that she did in fact identify a personal attribute deterring her from this aim, but that she did not want to share that publicly.

One should therefore acknowledge that, although this student could apply reflective practice skills, reflexivity (in other words, critical self-awareness as described by Finlay 2006) was still superficial. It appeared as if a deeper set of reflection enabled her to confirm her sense of purpose and how to pursue it (Koth 2003). She had to take a risk by confronting possible mistakes she made, in order to embrace an openness for learning. Braham (1995) supports this act of confronting current beliefs and values in order to challenge one's current level of competence by doing things in a new way.

## Practical Implications of Experiential Learning Embedded in AR Cycles for the Promotion of Professional Development

*Learning from concrete experience and critical reflection on that experience* is defined by Zuber-Skerritt (2002b: 114) as action learning and inherent to the processes delineated by the bottom circle in Fig. 2. In essence, therefore, engagement in AR cycles linked fieldwork education, CS and involvement in research for the students on fieldwork placement at this specific residential care facility. It appears as if successive research projects could potentially promote a scholarship of practice.

Within a scholarship of practice "*a community of learning in which students are apprentices in working with lecturers and practitioners to solve real world problems is emphasised*" is encouraged (Forsyth et al. 2005: 262). With these successive small scale research projects students did not only learn how to apply knowledge, but they were also

involved in generating research that would inform practice. Therefore, research projects could be viewed as a vehicle in which to expand scholarship from the firm academic grounding offered by the theoretical setting, to the generation of new knowledge in a more diverse environment offered by CS.

As AR is an ongoing process, this investigation is the stepping stone for the researcher towards compiling future small scale research assignments. This will ensure that insights gained thus far will in future be put to further scrutiny and confirmed or modified if necessary. The AR cycle process also allowed the researcher to alternate her approach between technical and practical modes of inquiry, but was not democratic or emancipatory in nature. (Students on fieldwork placements have to engage in small scale research projects as part of clinical training requirements and as such it is not a process in which they had any choice.) The nature of a technical inquiry is less empowering and may have limited the students' personal development. However, options for reflection and feedback were provided that were optional and not part of fieldwork assessment activities. Data and method triangulation were therefore applied and all these aspects contributed towards the reliability and validity of the investigation (see Table 2).

Finally, it should also be acknowledged that the AR cycle process followed here impacted on the clinical supervisor as practitioner and researcher, on the students with regard to their fieldwork education, as well as on the residents receiving the service. The focus of this article does, however, not extend to discuss the effects on the occupational therapist or the clients receiving the service.

## Conclusions

Alsop (2007: 139) stipulated that in South Africa, CS promotes practical experience "*that brings about transformative learning and assists in professional development*". Mere hospital-based learning as part of fieldwork education could therefore deprive undergraduate occupational therapy students from the impact of experiences provided by working in the realities of specific community settings. The residential care facility in this article specifically illuminated authentic circumstances and structured new information accordingly for occupational therapy service development to the students involved during their fieldwork education.

The opportunity to engage in experiential learning and AR within a CS setting created specific opportunities for conceptual change relating to learning about research and reflection. This was mainly due to the fact that experiential learning addressed the students' learning as novice researchers and future clinicians during their undergraduate professional development.

Key findings indicated that participation in the research projects with the added skill of reflection would encourage practice where the practitioner is constantly aware of what she does, why she does it and whether what has been done had a positive effect. And ultimately the combination of a community setting where experiential learning is associated with reflective and research activities integrated into AR cycles, could promote professional development of undergraduate students.

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