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Problem-based learning within occupational therapy education

Davys, D and Pope, KH

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Opinion Piece

Problem Based Learning within Occupational Therapy Education – A Summary of Our Experience.

The Directorate of Occupational Therapy at Salford University adopted a modified Problem Based Learning (PBL) approach within the newly validated programme in March 2004 to ensure that students have training that deems them fit for practice in today's health service and meets the demands of current academic, professional and societal contexts (Directorate of Occupational Therapy 2004). The use of such an approach was advocated by the National Committee of Inquiry into Higher Education in (1997) and the Department of Health 2000 in the Meeting the Challenge document. These reports called for a self-directed and flexible learning approach as opposed to more traditional teacher-led sessions. As some directorates of Occupational Therapy consider the introduction of a PBL approach within their curriculum, others are turning away. The authors of this opinion paper have two years experience in delivering a PBL curriculum and have developed an awareness of both the advantages and pitfalls of this style of educational delivery.

What is PBL?

Savin-Baden (1997) asserts that the roots of PBL lie within the work of Barrow in 1963 who found that a new approach to learning was required for medical students as gaps were identified between what students were taught in their training programmes and the problems that they encountered in practice. Wilkie and Burns (2003) describe PBL as a teaching and learning strategy that facilitates critical thinking skills and self-directed learning. Client-centered scenarios, problems or case studies (sometimes referred to as triggers) are presented and students working in small groups have to analyse and deal effectively with the resulting problems and issues. Students are supported by a tutor who acts as facilitator to guide thinking and encourage exploration. The stages characteristically found within the PBL process include problem identification and analysis, exploration of what is already known, consideration of what needs to be known or understood further, setting relevant learning objectives, gathering relevant data and a reconvening to share and evaluate information in relation to the original problem (Price 2003).

One of the fundamental precepts of PBL is that students are presented with a problem without any teaching in the traditional format and from this starting point; students have to research relevant issues around the problem. The programme at Salford however is a hybrid approach, where key note lectures and skills sessions are incorporated to ensure that minimum learning outcomes are achieved.

PBL in OT Education

When reviewing the literature regarding the use of PBL within occupational therapy education there are mixed results. Hammel et al. (1999) carried out qualitative research on student perceptions of PBL and found that the students considered a PBL approach to have improved their team building skills, critical reasoning, information management and communication skills. It should however be noted that this study only considered students from one academic programme and was set in America. In contrast to evidence which supports the positive outcomes associated with PBL there are studies that demonstrate the reverse. McCarran and D'Amico (2002) carried out a small scale study of twenty two OT students in America to compare their clinical reasoning skills. One group undertook a traditional teaching and learning approach to a specified module and the other group

undertook a PBL approach. It was found that there was no significant difference between the two groups, however a non-standardised evaluation tool was used to measure clinical effectiveness which could affect the credibility of the results. According to Trembley et al. (2001) PBL is appropriate within the context of an OT curriculum as it has been shown to develop adaptive practice, yet the authors outline the need for tutors to be knowledgeable about the PBL ethos and principles, to be skilled in group work, to be able to design appropriate learning resources and assessment tools and to possess advanced leadership and organisational abilities.

Positives of using PBL at Salford

When reviewing both positive and negative effects of PBL at Salford over the past two years, our views have been shaped by student evaluations of the modules, statements made by students within personal development sessions and staff comments. From a positive perspective, students have been able to demonstrate learning at a deeper and more holistic level along with the ability to integrate information more aptly as compared to students on the previous more traditionally taught program. This was evidenced from the students' ability to discuss aspects of a client scenario within assessments and small group work. An example of this can be seen with first year

students where so early in their training, they are able to understand that illness or disability will affect the whole person rather than the perception that a condition will affect just one occupational performance area. These experiences would appear to support the claim of Wilkie and Burns (2003) who state that a PBL approach will develop a more integrated and meaningful learning experience as well as learning at deeper level. Equally of value has been the students' ability to quickly become familiar with a range of research, study and presentation skills required for the feedback sessions.

By using a real-life clinical situation it is claimed that clinical reasoning skills will be enhanced and the expectation is that this will lead to improved clinical practice (Jacobs 1997). Certainly from our experience triggers centered on 'real-life' people have been highly valued by students, especially when they are able to meet the person in question. In this situation, students feel able to validate the appropriateness of their clinical reasoning skills. Whilst it is early days for us here at Salford, it is anticipated that the approach will lead to enriched clinical practice and interpersonal skills as well as a practitioner who is flexible and adaptive (Reeves et al. 2004, Wilkie and Burns 2003).

Negatives of PBL

From our implementation of a PBL approach over the past two years, not all experience has been positive. One of the major negative comments made by some students is a sense of frustration and anxiety at having to define the required learning outcomes with minimal direction from the facilitator and therefore feel that they have “wasted time going off on the wrong track”.

These comments are supported by Price (2003) who corroborates this sense of frustration as students setting their own learning outcomes may go down an inappropriate path of enquiry. Similarly some students and staff have reported that following the set PBL stages can become somewhat monotonous and they would prefer to simply “get on with it”. Interestingly ten tutors on the programme at Salford have reported that PBL requires them to facilitate sessions where the topic area is outside their clinical experience which can lead to reduced job satisfaction.

Some students feel uncomfortable with a PBL curriculum as they find it difficult to contribute effectively within their student groups. At the end of every module in addition to students carrying out self evaluation, staff provide each student with written comments on various components which

include participation within the group process and interaction with others. Some students therefore may work hard on research and meet the relevant learning outcomes but could receive reduced recognition for this due to their difficulty in vocalising their findings assertively within the group. This can lead to a sense of dissatisfaction and mirrors findings by Savin Baden (1998), a noted author within PBL literature, that outcomes of PBL varied when students were challenged about their group role and level of interaction within the PBL process. Within this study some students responded to the challenge effectively but others reported psychological withdrawal and feelings of worthlessness.

There are other negative elements to group working. One is that individuals have to rely upon and trust other group members to seek out and present an appropriate level of information on the designated learning outcomes.

Another is that as students have remained in their PBL groups for a full year, both staff and students alike have noted that while students quickly become familiar with members of their PBL group, there is a sense of isolation from the year group as a whole. These negative aspects of group working are in contrast to positive aspects commented upon by Royeen (1995) and Wilkie & Burns (2003).

In terms of resources, PBL places a heavy demand upon staff timetabling and resources such as equipment and rooms. Staff at Salford have also become aware, as reported by Reeves et al. (2004), of gaps in student knowledge, especially in relation to anatomy and physiology, although this will be addressed in the future by guiding the students in the use of negotiated resource sessions.

Such negative aspects have been commented upon by Price (2003) who says that in order to be effective, PBL needs experienced group facilitators, carefully designed case scenarios and relevant clinical situations, group commitment and positive group dynamics. PBL is time intensive for both staff and students alike, it is resource intensive and makes significant demands upon the skills of the facilitator.

Conclusion

The positive qualities of PBL and its acceptance within medical education have led to government bodies advocating that such an approach to teaching would be appropriate for the Health Care Professions. Our experience here at Salford to date is similar to the seminal work reported by Sadlo (1994) in

that we have experienced several advantages of PBL as compared to the previously adopted more traditional teaching methods. We do recognise however, the disadvantages of PBL and the need for careful consideration before adopting this approach within occupational therapy education.

1586

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