Is Team Teaching Learner-friendly or Teacher-centred? Mode of Delivery in a Postgraduate Module

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Abstract

This article reports on the mode of delivery utilized in a postgraduate (honours) module at a South African higher education institution. In 2011 the authors taught a module individually to their respective groups. In 2012 they used a team teaching approach for some lectures and in other lectures they taught their individual groups. Initial conversations with students indicated a sense of dissatisfaction with the team teaching approach. Using module evaluations and a focus group discussion with selected postgraduate students, this article answers the question: what are postgraduate student's experiences of the mode of delivery used in the team teaching approach? Findings indicate poor links between individual lecturers resulting in students' inability to connect one topic to another. However, a slight improvement in performance was noted when results were compared with the previous year. The argument is posited that a variation in the mode of delivery created a new discourse of transformation that challenges established notions of teaching which arguably promote learner passivity and are teacher-centred. A tension between transformative teaching and students' interest (performance) seems to be unresolved which raises the question whether team-teaching as a transformative approach is learner-friendly. Given the post-apartheid curriculum shift towards critical engagement and student participation, the dominant mode of delivery at higher education institutions is in need of transformation to increase student involvement in learning.

Keywords: Disruptive learning, mode of delivery, team teaching transformative teaching

Introduction

Conventional expectations for successful teaching and learning calls for a well- planned and organized pedagogical approach. It is generally accepted that good teaching requires that lecturers should be unambiguous and clear in their teaching with successful student learning manifested in the final examination results. This linear model of 'in-put' and 'out-put' teaching is constantly being challenged often at the risk of uncertain learner outcomes and student anxiety. This article argues that transformational teaching is complex and potentially destabilising to student learning. However, students' experiences and lecturers' reflective actions and the emergence of a new discourse characterised by tensions between transformational teaching and students' learning outcomes, reveals that teaching can also be destabilised. Given the new pedagogical framework which requires teaching to be learnercentred, we demonstrate that lecturers can transform students' experiences of discomfort and disorientation into meaningful learning moments. This article argues that students' experiences of team teaching were disorientating and confusing at times, and that lecturers' were often unaware that transformative teaching was sometimes not student-friendly. It seems that there is a need to close the debilitating gap between transformational teaching intentions and student learning outcome within a context of interactive pedagogical engagements.

The context of this article is a Bachelor of Education Honours (B.Ed Hons) module which is compulsory to obtain the degree. In 2012 the mode of delivery differed from that employed in 2011. In 2012 the mode of delivery was that of smaller groups and team teaching. Students were often confused and complained about the effects of this mode of delivery on their learning experiences. In the context of this study an interesting observation was made when comparing the results of the two years. Students' performance arguably improved when the multiple mode of delivery was employed. What can be deduced from this result is that for students' there may not be any significant risks in the adoption of alternative methods of teaching which may be accompanied by anxiety and disorientating learning experiences. In fact the

extant literature about team teaching points towards both advantages and disadvantages for teaching and learning in higher education institutions.

In view of these contradictory findings, this article argues that although the team teaching approach adopted in 2012 was welcomed by lecturers, it resulted in a mode of delivery that appeared to be confusing, disorganised and disruptive to students' learning but, paradoxically, produced other benefits such as increased student participation, exposure to teaching approaches, lecturer collaboration and a improvement in students' performance when compared to the previous year. Further, we argue that by identifying opportunities for intervention, meaningful learning situations could be created that have the potential to transform the experiences of students and lecturers into meaningful teaching and learning occasions. While transformative teaching is mainly determined by lecturers' concerns to promote active student participation, students' negative experiences are mostly ignored as opportunities for positive learning and transformative teaching. A closer identification and management of moments of tension as potential learning moments may increase the usefulness of transformative teaching methods. A more detailed discussion of transformative learning is provided in the literature section of this article.

The following section will briefly review the literature relevant to transformation approaches to team teaching as well as a conceptual framework which will be used to guide the data analysis to argue that the disruption of established learning patterns of students can potentially present opportunities for transformational teaching and learning. The literature review will be followed by a brief methodological note, data presentation, a discussion on the findings and a conclusion.

Literature Review

We begin by asking the question, what is team teaching, followed by some studies describing the advantages and disadvantages of team teaching for lecturers and students. A conceptual framework: 'disoriented experiences' and 'frames of reference' taken from Mezirow's Transformative Learning Theory (1990), Johnstone and Letton's (1991) concept 'signals and noises' as emerging moments of new learning and Amin and Ramrathan's (2009)

notion of 'learning and disruptive practices' emerged from the literature that employed the paradigm that learning is a complex human experience and occur in unexpected, paradoxical and contradictory experiences. This theoretical framework challenges dominant linear conceptions of learning and evolved out of interpretivism towards poststructuralist approaches which recognize the changing nature of context and the potential learning moments hidden in the meaning of interactional teaching and learning.

A variety of terms are used for team teaching: team teaching, collaborative teaching and co-teaching. Davis (1995) asserts that team teaching consists of two or more lecturers who collaborate in both the planning and delivery of a module. Bess (2000) concurs by describing team teaching as a process in which all teachers in the team are equally involved and responsible for teaching and assessment. While the terms used for team teaching may vary in the literature, it is acknowledged that,

There's messiness to team teaching that presents some of its bigger challenges, but also some of its most promising opportunities. Team teaching moves beyond the familiar and predictable and creates an environment of uncertainty, dialogue, and discovery. And that is what learning is all about (Plank 2011: 2 - 3).

In view of the 'messiness' and 'uncertainty' that accompany team teaching, scholars such as Robinson and Schaible (1995) and Letterman and Dugan (2004) caution that the success of team teaching depends on the team thinking thoroughly through the content that needs to be taught, and allowing for sufficient time to prepare. The relationship between the teaching processes which involve content and pedagogy and student learning which involves participation and feedback becomes crucial in the context of team teaching. Team teaching provides different contexts of pedagogy and to this end, Friend, Reising and Cook (1993) have suggested five models of team teaching.

The first model of team teaching is referred to as the 'lead and support' model where an unequal relationship between a senior and junior member of staff exists. Station teaching is the second model which involves teachers working with different groups in one class and students moving to the second teacher at a later stage of the lesson. The third model is called

parallel teaching since while this model involves joint planning, the teaching occurs in separate groups. The model in which one teacher pre-teaches or supplements the learning in a small group of students while the second teacher works with the larger or main group of students is referred to as alternative teaching. The fifth model is called team teaching as there is an equal relationship among teachers who share planning and instruction. In this study with the B Ed (Hons) students a variation of the parallel teaching model of team teaching was utilised. Although lecturers had weekly planning meetings, the planning sessions did not deal constructively with student experiences. Time was spent on sharing teaching materials and students' assessment tasks. Planning sessions were concerned with lecturers' issues.

The extant literature on team teaching points to its advantages and disadvantages. Yanamandram and Noble (2006) list the following advantages of team teaching from the teachers point of view: it creates time for teachers to engage in other academic activities; it creates opportunities for teachers to develop by exchanging ideas and knowledge with other team teachers; it has the potential to steer teachers away from teaching as though students are passive recipients of knowledge. Davis (1995), Goetz (2000) and Letterman and Dugan (2000) claim that team teaching helps to create a supportive environment and overcome the isolation created by more traditional forms of teaching. The disadvantage of the team teaching approach is that it is difficult to organise (Davis 1995) and it is more time consuming to be a team member than to teach alone (Letterman & Dugan 2004).

The team teaching approach has certain potential advantages for the student. Buckley (2000) avers that team teaching creates the opportunity for students to be taught by experts in a specific area of the module. Team teaching also increases the potential for the team to cater for the various learning styles of the students (Goetz 2000; Helms, Alvis & Willis 2005). Robinson and Schaible (1995: 59) see benefits for both teaching and learning when they state,

If we preach collaboration but practice in isolation ... students get a confused message. Through learning to 'walk the talk' we can reap the double advantage of improving our teaching as well as students learning.

But team teaching is also seen as a challenge by students. According to Kulynych (1998) such students have greater confidence in one teacher in the classroom which is well organised and operates smoothly. McDaniel and Colarulli (1997:34) state that students 'find it unsettling to be confronted with alternative interpretations'. They go on to explain that students, 'struggle with ambiguity of faculty conversations when no 'right answers' or one truth is communicated which they can write in their notes (34).

Much of what has been said thus far regarding the potential benefits of team teaching is supported by data from several studies. In a study conducted in the United States of America, Hinton and Downing (1998) found that 94% of the students indicated that they prefer team teaching over the traditional teaching method. In another study conducted by Partridge and Hallam (2006) at an Australian university, students identified the following features of team teaching which they liked the best: having access to two different perspectives on the course content; greater flexibility in obtaining support and asking questions; and the enthusiasm generated by the teaching approach. In the same study, however, students also listed the following aspects of team teaching which they liked least: uncertainty as to who to speak with first regarding a question or problem; inconsistency in instruction and information provided by the different teachers; and being assessed by two teachers. Yanamandram and Noble's (2006) study showed that first year marketing students at the University of Wollongong in Australia were encouraged by the variation in teaching styles to attend lectures and felt that the variation in teaching style improved the learning environment. However, there were also students in this study who indicated that there were too many variations in teaching styles and that this was detrimental to their learning environment.

Team teaching was also found to have positive effects on personal health (Southers, Carew & Carew 2002; Blanchad, Bowles, Carew & Carew 2001). Stewart (2005) and Yuan (2009) assert that team teaching promotes interdisciplinary contact between academics. In a study conducted in Malaysia in English as Foreign Language course, 60% of the students said that they prefer the team teaching style. In the same study only 40% of the students did not enjoy seeing a new lecturer each week. The data in the above-mentioned study also showed that 88% of the students agreed that team teaching enabled them to learn from experts on the topic.

According to the literature on team teaching, there are possible links between team teaching and student performance. Johnson, Johnson and Smith (2000) declare that students who were taught through collaborative means showed higher achievement levels, greater retention rates and improved interpersonal skills. In a study conducted by Flowers, Mertens and Mulhall (2000) it was found that team teaching had a positive impact on student achievement. However, the link between team teaching and student performance is neither obvious, nor is it guaranteed, as is evident from the University of Wollongong study (Yanamandram & Noble 2006). In this study students indicated that there were, amongst other points, a poor link of individual lectures, resulting in students' inability to see the continuity between lectures.

The main lessons drawn from the literature are that team teaching presents multiple opportunities for transforming teaching and learning with advantages and disadvantages for both students and lecturers. Team teaching can be 'messy' and may result in uncertain outcomes which may cause confusion as to what may be the 'correct' answer to questions. From the lecturers' perspective, team-teaching creates a sense of common purpose and collaboration which assures mutual support for each other. For the student team teaching offers opportunities for diverse learning and interdisciplinary knowledge. As for the disadvantages, for the lecturers it demands more time to organise and plan while for the students team teaching may be experienced as confusion and ambiguous experiences when they are exposed to different teaching styles and approaches.

While the aforementioned sections presented a discussion on the team teaching approach as a mode of delivery, this study is also foregrounded by a theory of transformative learning. We propose a conceptual framework composed from various learning theories as an appropriate guide to interpret the data that we generated to answer the critical research question: what were students' experiences of the team teaching mode of delivery that was adopted during the 2012 Bachelor of Education (B.Ed) honours course?

Mezirow (1990) identified three important components of learning when students are challenged in their studies. These components have been categorised and identified as part of Transformative Learning Theory. Providing student support needs to consider these three components which

are part of any learning process: disorienting dilemmas, critical reflection and the identification of psychic assumptions. Under these three conditions the student's learning can be transformed by revisiting and interacting with his or her existing frames of reference. Transformation process happens if the student faces new and challenging situations. Students may also learn through the creation of new frames of reference that may lead to the transformation of existing habits or thinking. Mezirow (1991) reveals that students' actions or performances (construction of knowledge) are determined by the way they interpret or explain what is happening to them during the time of their interaction with their environment (disorienting dilemma). This suggest that if modes of delivery are creating disorienting dilemmas students have no choice but to transform in order to learn or pass their modules or courses. Students also experience new emotions which are associated with the learning process. According to Coll, Dalgety and Salter (2002) when students enrolled for a course they had certain structured expectations which were based on their previous experiences. They are generally motivated by a more structured organization of learning material and traditional lecture presentations. If their experiences differ from what they are used to, they look for other ways of accessing the course in order to fulfil its requirements.

Another way to view transformative learning theory is through the lens of disruptive learning experiences. A study conducted by Amin and Ramrathan (2009) reveals that positive teaching and learning can also occur when students thought patterns and expectations are disrupted, destabilised and reconstructed. This suggests that students realize that in order to pass their courses they need to learn to select what is useful to them from what is less useful. According to Johnstone and Letton (1991), any learning process has two components what they labelled as 'signals' and 'noises'. As a result the selection of significant aspects of the learning process (signal) from lesser important aspects (noise) is crucial because one's memory working area is relatively small to accommodate everything. Therefore, students learn either by assimilating or accommodating what they are learning (Mezirow 1991). Assimilation takes place when a student uses existing frames of reference to process whatever new information is given to him / her in the learning process (familiar information). Accommodation takes place when a student does not have relevant frames of reference to process what is given to him or her or is forced to transform his or her frames to accommodate new learning. According to Johnstone and Letton (1991), students can learn if they can select the important signals from noises through either the processes of assimilation or accommodation.

The above literature explicates the complex terrain of teaching and learning and the challenges involved when employing different modes of teaching to achieve transformational objectives. Given the fluidity in teaching and learning contexts in the higher education sector, opportunities for new learning patterns become a common feature in the teaching and learning domain. It would be in the interest of the higher education teachers to recognise this innovative feature of their workplace environment and to engage with it in a critical way. In this article the experiences of students become the focus of analysis to illuminate the learning processes that accompanied the use of a team teaching approach as a means to promote transformational teaching.

Methodology

This study was undertaken to investigate the experiences of students who attended a specific compulsory module as part of their postgraduate honours degree qualification. The critical research question that provided the impetus for the research methodology was: what are students' experiences of the mode of delivery used in a postgraduate (honours) module? Given the post-apartheid context of a South African higher education institution, this question will assist in explaining the complex nature of pedagogical experiences of students and lectures pursuing meaningful transformational practices.

The study employed a qualitative case study design because experiences could potentially be dealt with descriptively and in an explorative and contextual way (Creswell 1994). In this study the focus was on describing students' experiences of their learning in a restricted environment – when team teaching is employed as a method of teaching. The case study design makes it possible to explore students' and lecturers experiences of team teaching in the context of a particular module.

According to Willis (2008), the case study method has 'experiential knowledge' at the heart of what it to be learnt:

Case study facilitates the conveying of experience of actors and the stakeholders as well as the experience with the case. It does this largely with narrative and situational descriptions of case activity, personal relationship, and group interpretation. While the case study allows for deep description and exploration of a phenomenon, one cannot generalize on the basis of an individual case (Willis 2008: 218).

A qualitative study aiming at an interpretation of a group experience of students does not seek to generate broad generalisations. However, this does not detract from the scientific nature of the study which intends making a contribution to existing knowledge in a field that is still relatively underresearched. The findings of a case study are often useful explanations which are repeatable and subjected to critique and debate which promotes a scientific understanding of the phenomenon.

In this case study the data collection methods were students' qualitative course evaluations, the focus group interview, lecturers' reflections, experiences and data of the previous year's (2011) mode of delivery. Data generation started with a random selection of forty-three module evaluation forms from students, where the students were providing critical feedback on their experiences of the mode of delivery that was used in the module. Over and above these forms, the students' examination results were also analysed. Students' evaluations of the course could be summarised in four clear themes which are stated in the next section. These themes also informed the focus group questions which provided an opportunity to deepen our understanding of the students' evaluations.

A focus group interview consisting of six students was conducted to get first hand responses of students on their experiences. The interview lasted for about two hours. The four knowledge themes that emerged from the analysis of the students' evaluation forms provided the questions for the semi-structured focus group discussion. The discussion was recorded on audio-tape and transcribed. The transcribed data were analysed and coded according to Creswell's (1994) recommendation on how to arrange units of meaning. The focus group discussion was also used as triangulation method to increase the trustworthiness of the data analysis of the evaluation forms. Lectures reflections and experiences were extracted in a critical discussion

after collecting the data from the students.

Keeping in mind Mezirow's (1990) notion of 'frame of references', Johnstone and Letton (1991) and Amin and Ramrathan's (2009) idea that disruptive practices may potentially lead to learning moments, the data were analysed to answer the research question. The findings are presented below as the outcome of an integrated analysis of the students' evaluation forms and the focus group transcriptions. Lecturers learning are integrated in the discussion and conclusion.

Findings and Discussion

The first data set that was analysed was the students' evaluation forms. In this section the main themes that emerged from the students' evaluation forms are presented. Four major themes emerged from the analysis. Only the qualitative section of students' evaluations was tabulated. Also, those evaluation forms with comments referring to the 'mode of delivery' were noted and analysed. There were 43 responses that referred to the mode of delivery. These responses were subjected to a method of content analysis and often repeated words, expressions and concepts were grouped into meaningful units that emerged as themes (Creswell 1994). The following thematic responses emerged from the data:

- Eleven students noted that confusion in the mode of delivery was their main objection.
- Fifteen students mentioned problems with the teaching methods adopted by different lecturers.
- Eight students complained about the frequent change of venues.
- Nine students expressed the view that the course appeared to be disorganized and a need for better organisation of materials.

The sense of confusion seems to emerge as a frequent experience of students during this course which is also supported by the Plank (2011) study who described team teaching as 'messy' and 'moves beyond the familiar and ...creates an environment of uncertainty'. These experiences of confusion

were unsettling for students but presented opportunities for transformative learning for lecturers. Mezirow (1990) explained this experience of confusion as one of the three categories of Transformative Learning Theory. According to Mezirow these students experienced confusion as a 'disorienting dilemma' which should be revisited by interaction with students' existing 'frames of reference' and make the connections between what they know and what are potentially new knowledge or new 'frames of reference'. The assumption here is that students come to the lecture with existing frames of knowledge which are constantly challenged and questioned by critical reflective teaching. By engaging students during the lecture in a critical reflective way, the lecturer forces them to recall their existing frames of references which can be either expanded or new frames created if they do not exist. In this way transformative learning takes place as an interface between the lecturers' presentation and the expansion of the students' frame of reference.

Students' experiences such as the course being 'disorganised' and produces 'uncertainty' also present opportunities for transformative learning which should be facilitated by lecturers' intervention and reflections with the group as a whole. According to Johnstone and Letton (1991), students' dissatisfaction, with lecturers who adopt different teaching styles can be reduced by improved pedagogy which lecturers should be aware of. In this study lecturers were not necessarily concerned about these students' experiences as potential learning moments as they were more focused on the delivery of the content. In paradoxical ways students are presented with learning opportunities which could only be enhanced if lecturers become aware of the complex nature of learning which may take place counter-intuitively and unexpectedly. What might appear as being disorganized and uncertain in the students' perspective may present opportunities for transformative teaching and learning to take place.

As much as these experiences of students' are arguably of a negative and unsettling nature, they can also be positively explained. For example, Coll, Dalgety and Slater (2002) assert that when students' expectations of a certain structure in a course are not fulfilled, they look for other ways of accessing the course in order to fulfil its requirements. In this regard, lecturers reported that their students often requested extra lessons and extra time to better understand a section of the work that was presented during

team teaching. These students used what Johnstone and Letton (1991) refer to as, 'signals and noises' to note potentially important knowledge in need of clarification.

The focus group discussion confirmed the notion that students' experiences were that of confusion and disorganisation. Difficulty was experienced when lecturers explained the concept 'paradigm',

Because I think say for example if you came for a lecture and take a topic like paradigms, for example...another lecturer come and she will come in with her own view of paradigms...then I will have to go back and read and then you know that person will come and say something about paradigms and then I will get confused and then I will come to you and say, 'Sir, I'm confused'...(focus group participant).

The above quotation illustrates that students take note of complex concepts and grapple with them but that they are burdened with the responsibility to grasp what they mean. While confusion may be a negative experience, it provides the potential for learning if pursued by the student and an attentive lecturer.

The changing of venues and lecturers contributed towards the confusion as students were trying to develop their own sense of understanding and meaning as the following excerpt demonstrates:

I must say I agree with him with the alternation...it is a bit of a problem because I want to view a specific class but then with the alternation, my view of this class changed and also the students, they have different views, for example, their lecturer told them ... and then in the exam people are confused about what to do...my lecturer told me this...my lecturer told them so and so...(focus group participant).

As mentioned before, these negative experiences can become transformed into positive learning if lecturers are more conscientious about the nature of transformative teaching and learning and prepare themselves better for team teaching occasions. If better prepared, lecturers would know

that they need to establish what preceded their lesson and connect the old with the new lesson to ensure continuity in understanding. A constructive approach would potentially reduce the confusion caused with the change of venues and lecturers during team-teaching sessions.

Experiences of students with educational technology during the course also emerged as moments that demonstrated confusion especially when lecturers referred students to learning sites in an erroneous and inaccurate way. Students also felt that lecturers were not properly informed about the use of the learning site which also caused confusion. One student commented that the lecturer was emphasising the learning site but the particulars were wrong. The view was expressed that lecturers were 'not prepared with the technological aspect of the module'. This suggests that some students perceived the lecturers as 'digital immigrants' while they judged themselves as 'digital natives' (Khoza 2011). Students' experiences of educational technology could not be addressed and transformed which calls for serious attention and (re)skilling of lecturers in technological education.

In the focus group discussion diverse student experiences were expressed about the size of the class. Making sense of class sizes centres around issues of participation and learning in a community of practice. In smaller groups, participation is more likely to happen than in larger groups. Involvement in learning such as asking questions and debating differences come easier for some students than they do for others. However, some students claim that confusion is reduced in large groups because in team teaching contexts, possibilities for mix messages are increased.

With regard to their responses as to how the mode of delivery influenced their performance in the module, students expressed a sense of anxiety and trepidation due to the confusion around preparations for assignments and multiple choice tests which took place almost every week. The view was expressed that explanations from different lecturers on the 'paradigm' caused confusion in the examination as they observed that their understanding of 'paradigms' as given in the class was different to what the examiner wanted:

... yes, I would like to say there are many factors that have influenced my results, there is definitely the switch between, the fluctuation of lecturers, but there is also the mode of assessment, I

think if we could have beside the(focus group participant)

There appears to be some consistency between students' experiences of confusion due to the mode of delivery and the negative perception thereof on their performance in the module. Having argued that students disliked the confusion and apparent disorganisation of the module, a comparison of the 2011 and 2012 average percentages were looked at. The performance in the 2012 examination improved by six percentage points which may not seem significant supports a notion of slight improvement (Johnson, Johnson & Smith 2000).

The data generated in this project converged to support the emergence of at least four major knowledge themes which were discussed in the section above. These themes are manifestations of students' experiences of the team-teaching mode of delivery that was adopted as a case of transformative teaching and learning. While the argument was made that transformative teaching which is ostensibly aimed at shifting the focus of learning from the teacher to the student, remain largely teacher-centred while students experience transformative teaching as 'disorientated, confusing and disruptive' (Mezirow 1990; Johnson & Letton 1991; Amin and Ramrathan 2009). These experiences, we argue are demonstrably potentially transformative but requires better planning and reflective action as an ongoing process of developing a new pedagogy. This article questions the linear view that students' success can only be the outcome of the 'in-put' 'out-put' model of teaching and learning and that transformative practices present opportunities for learning for both student and teacher. In the conclusion below we share our reflections on how team-teaching as a transformative approach to pedagogy could become meaningful educational practice.

Conclusion

In the presentation of this module, we discovered that the mode of delivery which some students experienced as 'confusion' and 'disorganization' produces moments of learning for both student and lecturer (Yanamandram & Noble 2006). Transformative teaching which is at the heart of the challenge facing teaching in the post –apartheid educational period may not

always take place in a smooth and organized way. This article dispels the logic inherent in established teaching approaches that students learning experiences should be organized along traditionally recognised lines of structure and content. We dispel a linear notion of learning as the only productive form for pedagogy. We argued that while transformative teaching may be driven by the lecturers, the experiences of students have been mostly neglected which strengthens the argument that transformative teaching and learning needs to become student-friendly and less lecturer-centred.

Upon reflection, the following five main transformative learning messages that emerged from this project were: the need to identify moments of confusion and uncertainty in practice as potentially transformative moments in teaching and learning; the need to plan and manage teamteaching within a transformative teaching and learning framework; to be transparent and negotiate student participation from the beginning; to do a situational analysis before assuming the new lesson to ensure continuity between lessons; and to approach transformative teaching and learning in a student-friendly manner that prepares student and lecturers to engage the lesson as a discovery of knowledge.

The moments of teaching and learning that occurred in the context of this project have pedagogical value as indicated by students and lecturers' experiences despite the instability and disorientation experienced by the students and the arguably one-sidedness of the lecturers. While disorientation and confusion may not be a positive motivation for learning, it questions the traditional linear notion as the only way that students learn and become successful. If transformative teaching and learning is to become mainstream pedagogical practice in higher education institutions, the complex nature of learning needs more experimentation and reflective action to increase diverse learning experiences.

References

Amin, N & P Ramrathan 2009. Preparing Students to Teach in and for Diverse Contexts: A Learning to Teach Approach. *Perspectives in Education* 27,1: 69 - 77.

- Bess, J 2000. Integrating Autonomous Professionals through Team-teaching. In Bess, JL (ed): *Teaching Alone, Teaching Together: Transforming the Structure of Teams for Teaching*. San Francisco: Jossey-Bass.
- Blanchad, K, S Bowles, D Carew & PE Carew 2001. *High Five! The Magic of Working Together*. New York: William Marrow.
- Buckley, F 2000. *Team-teaching: What, Why and How?* Thousand Oaks, California: Sage Publishers.
- Coll, R, K Dalgety & D Salter 2002. The Development of the Chemistry Attitudes and Experiences Questionnaire (CAEQ). *Chemistry Education and Research Practice* 3,1:19 32.
- Creswell, JW 1994. Research Design: *Qualitative and Quantitative Approaches*. London: SAGE.
- Davis, JR 1995. Interdisciplinary Courses and Team Teaching: New Arrangements for Learning. American Council of Education. Phoenix, AZ: ORYX Press.
- Flowers, N, SB Mertens & PF Mulhall 2000. How Teaming Influences Classroom Practices. *Middle School Journal* 32,2 52 59.
- Friend, M, M Reising & L Cook 1993. Co-teaching: An Overview of the Past, a Glimpse at the Present and Consideration for the Future. *Preventing School Failure* 37,4: 6 10.
- Goetz, K 2000. Perspectives on Team Teaching. *Egallery* 1,4. Available at: http://www.ucalgary.ca/~egallery/goetz.html. (Accessed 15 August 2013.)
- Hammersley, M 1990. *Reading Ethnographic Research: A Critical Guide*. London and New York: Longman.
- Helms, M, J Alvis & M Willis 2005. Planning and Implementing Shared Teaching: An MBA Team Teaching Case Study. *Journal of Education for Business* September/October: 29 34.
- Hinton, S & JE Downing 1998. Team Teaching a College Core Foundations Course: Instructors' and Students' Assessments. Paper presented at the Annual Meeting of the Mid-South Educational Research Association, 4 6 November 1998, New Orleans, LA, USA.
- Khoza, SB 2011. Who Promotes Web-based Teaching and Learning in Higher Education? *Progressio: South African Journal for Open and Distance Learning Practice* 33,1: 155 170.

- Kulynych, JJ 1998. Crossing Disciplines: Postmodernism and Democratic Education. *College Teaching* 46,4: 144 149.
- Janesick, VJ 2000. The Choreography of Qualitative Research Design. In Denzin, NK & YS Lincoln (eds): *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage.
- Johnson, DW, RT Johnson & KA Smith 2000. Constructive Controversy. *College Teaching* 32: 29 37.
- Johnstone, AH. & KM Letton 1991. Practical Measures for Practical Work. *Education in Chemistry* 28,3: 81 83.
- Letterman, MR & KB Dugan 2004. Team Teaching a Cross Disciplinary Honors Course: Preparation and Development. *College Teaching* 52,2: 76 79.
- McDaniel, E & G Colarulli 1997. Collaborative Teaching in the Face of Productivity Concerns: The Dispersed Team Model. *Innovative Higher Education* 22,1: 19 36.
- Mezirow, J 1990. Fostering Critical Reflection in Adulthood: A Guide to Transformative and Emancipatory Learning. San Francisco: Jossey-Bass Publishers.
- Mezirow, J 1991. *Transformative Dimensions of Adult Learning*. San Francisco: Jossey-Bass Publishers.
- Partridge, H & G Hallam 2006. New Pathways to Learning: The Team Teaching Approach. A Library and Information Science Case Study. *Informing Science: International Journal of an Emerging Transdiscipline* 2: 103-118. Available at: http://eprints.qut.edu.au/1322/.
- Plank, K (ed) 2011. *Team Teaching: Across the Disciplines, Across the Academy*. Published in Association with The National Teaching and Learning Forum, Stylus Publishing: Sterling, Virginia. Available at: http://derekbruff.org/blogs/tomprof/2012/03/22/a-rough-and-tumble-enterprise/. (Accessed September 9, 2013.)
- Robinson, B & RM Schaible 1995. Collaborative Teaching: Reaping the Benefits. *College Teaching* 43: 57 59.
- Southers, C, PE Carew & D Carew 2002. *Virtual Teams Handbook*. Escondido: The Ken Blanchad Companies.
- Stewart, T 2005. Interdisciplinary Team Teaching as a Model for Teacher Development. *TESL-EJ Top* 9,2: 45 58.

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- Willis, JW 2008. *Qualitative Research Methods in Education and Educational Technology*. United States of America: Information Age, Publishing Inc.
- Yanamandram, V & G Noble 2006. Student Experiences and Perceptions of Team Teaching in a Large Undergraduate Class. *Journal of University Teaching & Learning Practice* 3,1: 49 65.
- Yuan, Y 2009. Five Steps to Creating an Effective Team Teaching Relationship. *The Internet TESL Journal* 15,2. Available at: http://iteslj.org/Techniques/Yuan-TeamTeaching.html. (Accessed September 10, 2013.)

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