

IMPROVING TEACHING AND LEARNING IN A REGIONAL UNIVERSITY CAMPUS THROUGH A FOCUS ON THE AFFECTIVE DOMAIN

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ABSTRACT

This paper describes the research process undertaken in a pilot study conducted at the University of South Australia's Centre for Regional Engagement (CRE), and reports the feedback collected in relation to this process and the project overall. Academic staff and students from CRE's two sites located in the rural and regional cities of Whyalla and Mount Gambier, South Australia, were recruited for the study. The purpose of the pilot study was to promote awareness of the value of affective teaching and learning amongst university academic staff and students and to implement the affective teaching and learning approach through mindfulness meditation interventions. The research aimed to investigate (a) the specific technique of mindfulness meditation as a strategy to develop awareness of the importance of the affective domain in teaching and learning and (b) whether/how engagement in mindfulness meditation by academic staff can contribute to an increase in affective teaching and learning. Academic staff participating in the pilot study found their involvement in the research improved their knowledge of the affective domain and contributed positively to both their approach to teaching and to their lives.

INTRODUCTION

This paper describes the method and evaluation of a pilot study undertaken by a group of researchers from the disciplines of Nursing, Computer Science and Business at the University of South Australia (UniSA) with the ultimate purpose of improving teaching and student learning through a focus on the affective domain. The pilot study was conducted at the two sites of UniSA's Centre for Regional Engagement (CRE) based at Whyalla, 400 kilometres north-west of Adelaide, the capital of South Australia. As well as the Whyalla Campus, it oversees the Mount

Gambier Regional Centre (MGRC) located in the south-east of the state. The CRE has approximately 520 students and is the only regional university in South Australia. The small size of the CRE and easy access to staff and students from a variety of disciplines made it an appropriate location for the study.

To address the affective domain this pilot study drew upon the traditional learning practices of mindfulness meditation which facilitates the development of self-awareness, empathy and compassion (Beddoe & Murphy, 2004; Kabat-Zinn, 2005). The concept was that by having staff enhance their motivations, attitudes and feelings through mindfulness meditation this would provide awareness of the importance of the affective domain and allow them to generate strategies to promote the affective domain of teaching and learning. While mindfulness meditation is being increasingly accepted in Western culture there has been limited exploration of mindfulness in relation to its effect on the affective domain of teaching and learning. The pilot study used an action research cycle of reflection, planning, implementation (action), evaluation (observation) and modification (reflection and planning), and final evaluation (Kemmis & McTaggart, 1988; Altrichter, Kemmis, McTaggart, & Zuber-Skerritt, 2002). A first step in developing teaching and learning practice in the affective domain involves providing academic staff and students with an understanding of its existence, and hence a series of workshops were implemented across the discipline units at the CRE. The technique of mindfulness meditation was used to achieve greater individual awareness of the affective domain with workshop participants combining their experiences and disciplinary knowledge to promote the affective domain of teaching and learning.

The study aimed to answer the following research questions:

1. What is the value of affective teaching and learning for staff and students?
2. Can mindfulness meditation increase awareness of the affective domain among academic staff?
3. Does mindfulness meditation increase psychological well-being among academic staff?
4. How can an emphasis on affective learning improve student learning?

This paper outlines the extensive process undertaken in conducting the research and reports the evaluation data collected in relation to each workshop and the project overall.

BACKGROUND

The growth in student numbers and changes within universities where personal tutoring and one-on-one and interactions are often replaced by centralised counselling and learning support systems and courses are delivered online, has resulted in difficulties being experienced regarding teaching and learning within the affective domain (Attwood, 2009). The 'affective domain', along with the 'cognitive

domain', that addresses the intellectual abilities and overall understanding of the content, and the 'psychomotor domain' that relates to learning physical skills, is part of a system of educational objectives postulated in Bloom's Taxonomy of Learning Domains (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956), that encourages educators to take a holistic approach to learning. The affective domain encompasses attitudes, beliefs, values, feelings and emotions (Bloom et al, 1956; Billings & Halstead, 2009). 'Affective teaching', therefore, focuses on valuing student attitudes, feelings and beliefs and encourages students to discuss their personal interests and experiences.

According to Zhang and Lu (2009), learning cannot be separated from emotion: emotion is essential to learning, and teaching should not ignore emotion as a vital influence in the learning process. Zhang and Lu (2009) go on to explain that emotions possess motivational, informative, regulative, protective functions and that learning relies on an emotional state, determining what we pay attention to and what we learn. Hence, the affective aspect of learning encompasses the interaction between how students feel, act, and think. Affective teaching aims to develop students' affective qualities and play a key role in using emotions to optimize cognition and enhance students' integrative ability. This affective teaching should be used in conjunction with cognitive teaching which focuses on providing information and explaining concepts. If the emotional components of courses taught are ignored, teachers may deprive students of meaningfulness; if the affective domain is ignored, students have trouble finding value in the information they learn, reducing learning and retention (Bolin, Khamtsova, & Saarnio, 2005). Authors such as Neuman and Forsyth (2008), and Ten Cate and De Haes (2000), discuss the teaching of institutional values and attitudes. In contrast, Van Valkenburg and Holden (2004, p. 138) suggest that values are intrinsic and highlight the way in which affective learning needs to develop from within rather than being externally imposed.

Hyland (2009, p. 129) argues that when practised by teachers, mindfulness can highlight their students' "identities, needs, values and life stories", often neglected by current educational practice. He states:

In helping us to let go of the often mindless and restless striving that lies at the heart of our mental processes and habit-driven behaviour, mindfulness prepares the way for genuinely rich and deep learning and the journey from self-obsession to a fuller engagement with life and with others (p. 130).

Mindfulness involves paying attention to what is most important in the present moment (Thich Nhat Hahn, 1999; Germer, Siegel, & Fulton, 2005) and is "the process of learning how to be with all experiences while being less judgmental and reactive" (Beddoe & Murphy, 2004, p. 307). Beddoe and Murphy explain that mindfulness practice includes "self-reflection, acceptance, self-care, developing resources to care for others, and opening to difficulties without avoidance" (Beddoe & Murphy, 2004, p. 307). Hyland (2010, p.527) emphasises that "the immense potential of paying close attention to our thought processes should not be under-estimated". There is a

rapidly increasing body of research evidence supporting the use of mindfulness meditation to improve psychological well-being (Dobkin, 2008; Brown & Ryan, 2003; Soulsby, Williams, Silverton, & Crane 2002) and health (Carlson, Speca, Faris, & Patel, 2007; Ludwig & Kabat-Zinn, 2008). While approaches to developing mindfulness vary across different cultures, the mindfulness technique can best be considered as a disciplined and simple concentration exercise that slowly retrains the mind to be more attentive, objective and less reactive (Hassed, Sierpina, & Kreitzer, 2008) and thus reduces physiological stress responses (Davidson et al., 2003; Ludwig & Kabat-Zinn, 2008).

From an affective learning perspective, mindfulness meditation helps to temporarily disengage the mind from external stimuli to focus inwardly, immediately increasing awareness of thoughts, feelings and emotions. Biological plausibility for the positive influence of mindfulness on learning can be argued on the basis that mindfulness meditation can moderate stress responses that inhibit learning (Kabat-Zinn, 2005). Psychological plausibility can be argued as mindfulness meditation is an exercise in concentration with an intrinsic focus that will gradually uncover layers of emotion, attitudes and feelings (Kabat-Zinn, 2005). Even though mindfulness meditation is used by millions of people and is recognised as a powerful technique for self-awareness and physiological and psychological well-being (Carlson, Speca, Faris, & Patel, 2007; Ludwig & Kabat-Zinn, 2008), and there is a substantial body of literature supporting the value of affective learning (Zhang & Lu, 2009), there has been no rigorous investigation of the use of this technique to improve awareness of the affective domain. Therefore, this pilot study was initiated to generate data related to the application of mindfulness meditation to teaching and learning in the affective domain.

THE RESEARCH

Academic continuing and sessional staff at the CRE's Whyalla Campus and Mount Gambier Regional Centre were recruited to participate in the research. The CRE was considered to be particularly suitable for the pilot study because its small class sizes provide the opportunity for closer relationships between academic staff and students. Convenience sampling (Devers & Frankel, 2000) was used to select the participants. The criteria were that the academic staff members were involved in university teaching at the CRE in the year of the study. While the research was innovative with regard to the practice of mindfulness meditation, buy-in of staff was achieved by highlighting the scope for improved student-staff communication and the professional benefits such as increased self-awareness, self-regulation, motivation and ability to manage negative emotions that could be gained.

An introductory e-mail, with an attached Participant Information Sheet that outlined the aim of the research and gave details of the structure of the project and research team, invited participation in the pilot study. This information sheet also described the study's requirements of participants and advised that involvement was voluntary; that staff members could withdraw from the research at any stage; and

that participants would not be identified in any reports or papers concerning the study. Staff members were referred to the chief researcher if they had any questions or required further information and were provided with the contact details of the Executive Officer of the Human Research Ethics Committee should they have any ethical concerns about the project or their rights as a participant. The project was approved by the university's Human Research Ethics Committee and written consent to involvement in the study was obtained from the participants before its commencement.

The methodological approach was both quantitative and qualitative. Several different survey instruments (described below) were administered and individual telephone interviews conducted. The telephone interviews included open-ended questions and provided the interviewer the advantages of being able to control the sequence of questions and the ability to probe (Neuman, 2006).

The pilot study was divided into four stages:

Stage 1: Pretesting, workshops and mindfulness meditation

Stage 1 involved pre-surveying the participants to investigate staff perceptions about the importance of affective teaching and learning and to measure their psychological well-being. A series of three, four-hour workshops provided participants the opportunity to learn mindfulness meditation techniques, work together to document practical strategies for promoting affective learning, and to reflect on the results of their application.

An initial Workshop was held in February prior to the commencement of the academic year at both the Whyalla and Mount Gambier sites. Of the 28 eligible staff invited to be involved in the study, 14 attended the workshop (Whyalla 9; Mt Gambier 5), giving a participation rate of 50%. Following a brief introduction to the project, participants completed a one-page pre-workshop questionnaire based on Stenzel's (2006) 'Rubric for Assessing Learning and Teaching in the Affective Domain'. This staff survey had two parts: the first with the lead-in question 'To what degree have you implemented this approach in your teaching?', the second, with the lead-in question 'How confident are you about performing this skill?' For each question, eight items were then ranked on a scale of one to five (1 = 'Not at all', 5 = 'A great deal'; 1 = 'No confidence', 5 = 'Very confident'). This questionnaire was designed to determine awareness of affective teaching. The participants also completed the GHQ-12 General Health Questionnaire (Goldberg & Williams, 1988). The GHQ-12 survey instrument contains 12 items scaled from 1 to 4 and is designed to measure the participant's psychological well-being.

During the workshop the researchers explained what is meant by the affective domain and introduced concepts from the literature related to teaching and learning in the affective domain. They also outlined the basic principles and techniques of mindfulness meditation and staff took part in a meditation exercise as preparation

for their daily practice. A resource pack comprising information sheets, two compact discs containing guided meditations and a diary, was distributed to assist the participants in undertaking their practice of meditation.

At this stage of the project participants were requested to engage in meditation practice for five minutes twice a day over the following 13 weeks and reflect on their discoveries of the effects of being mindful as opposed to being unmindful. Participants were requested to intentionally engage in deep thinking around the affective domain of learning and document strategies for promoting affective teaching and learning and their experiences generally with the meditation practice into the diary that had been especially prepared for this task. For each of the 13 weeks, the diary provided space to record the times of the meditation practice and responses to the items: 'What are some of the positive experiences that I have encountered in my meditations this week?'; 'What are some of the challenges that I have encountered in my meditations this week?'; 'What are some of the reflections and feelings that I would like to record at the conclusion of this week?'; 'My goal for next week is:'.

At the conclusion of the workshop an evaluation sheet based on the Harvard One-Minute questionnaire was used to assess the workshop. It contained four questions as follows:

- In your view, what was the most important information you gained from the session?
- List the best aspects of the educational session.
- What information could be included or expanded upon for future sessions?
- Any other comments.

The Harvard One-Minute questionnaire is easy to prepare and administer and is generally well received because it is not lengthy and complex. It is particularly relevant to the workshop situation because it asks questions that stimulate reflection and critique of content immediately after the event (Stead, 2005; Drummond, 2007).

Following this initial workshop an e-mail was forwarded thanking participants for their attendance and confirming the diary was for their personal use, that it would not be collected, but they would use their recordings in it to reflect on their experiences during the second workshop. The e-mail also advised that the researchers would maintain contact throughout the study period to assist them in maintaining motivation and self-discipline and to gather feedback on their progress. Three staff located at the Whyalla campus who had expressed an interest but were unable to attend the first workshop were provided with copies of the presentations and materials that were distributed. A further e-mail was sent early March attaching two related published articles and a URL link to a relevant report; a telephone interview was conducted with participants in April; and an e-mail sent early July attaching an article for further reading.

The telephone interview was conducted by a PhD student experienced in research techniques who was independent to the research team. The aim of this first follow-up interview was to help the participants maintain their motivation in relation to the meditation practice and act as a checkpoint, ensuring their involvement in the project was progressing to plan. Each interview was estimated to take approximately 15 minutes and included the following questions:

- How are you going with your meditation practice? Are you keeping up with your practice? On track?
- Do you have anything you could share with us?
- Are you recording your thoughts and feelings in your meditation journal?
- Do you think you need extra support for your daily meditation? If so, what kind of support do you think you may need?

These telephone interviews were digitally recorded and transcribed.

Prior to the second workshop three additional Whyalla staff had joined the pilot study and four participants discontinued their involvement (Whyalla 3; Mt Gambier 1). Their reasons for not continuing being: too many other commitments; no longer working with UniSA; no longer interested. A total of 13 participants (Whyalla 9; Mt Gambier 4) continued in the study.

The second workshop, held mid-July prior to the beginning of semester two, commenced with a detailed overview of the structure of the research project, and then focussed on self-reflection and evaluation of the meditation practices; exploring and identifying key affective learning strategies from the literature; and reflective exercises to develop practical, affective learning strategies applicable to the classes the participants would be teaching in the second semester.

Stage 2: Implementing affective learning strategies with students and course evaluation

Stage 2 involved pre- and post-testing of students in selected semester two courses that were delivered using the strategies to promote affective learning that were developed in stage 1.

Participants were requested to select a semester two class and implement the affective learning strategies within this class with the aim of enabling the participant and their students to understand the value of learning in the affective domain for improving student engagement and learning outcomes. Feedback from the students was obtained in the first and last week of the study period using a specially designed student survey based on Stenzel's (2006) 'Rubric for Assessing Learning and Teaching in the Affective Domain'. This instrument aimed to investigate the students' perceptions of the importance of affective teaching and learning as part of the learning experience and whether the students experienced affective teaching.

The questions were linked to those asked of the academic staff so that the same concepts were measured, with the questions adapted so that they related to the students and were as clear as possible to avoid misinterpretation. This survey contained two sections: the first section had the lead-in question 'Consider the best teacher you have encountered: To what degree did this teacher implement this approach in their teaching?', the second section had the lead-in question 'Now reflect on what you consider to be average or standard university teaching: To what degree was this approach implemented in teaching?' Eight items were then ranked on a scale of one to five (1 = 'Not at all'; 5 = 'A great deal').

A researcher visited the class at the beginning of the study period, provided a brief outline of the project and invited the students to complete the two-page survey instrument. The students were advised that their participation was voluntary and their individual responses anonymous. 67 students completed the questionnaire (Whyalla 46; Mt Gambier 13; and External Social Work and Nursing students 8). At the end of the study period the researcher visited the classes again and administered the same survey instrument to the students. A total of 48 questionnaires were completed at this time (Whyalla 42; Mt Gambier 6).

Participants were advised in September that another 15 minute telephone interview would be conducted by the PhD student during October. These interviews were also digitally recorded and transcribed. The questions asked were based on those in the previous interview:

- How are you going with incorporating affective domain strategies with your students?
- Do you have anything you could share with us?
- Are you recording your thoughts, feelings, any outcomes at all?
- Do you require extra support to assist? If so, what kind of support do you think you may need?

Stage 3 Post-testing of participating staff

Stage 3 involved post-testing the participants by again administering the two survey instruments related to the perceptions of affective teaching and learning and psychological well-being.

A final workshop was held mid-December at both the Whyalla and Mt Gambier sites. The aim of this workshop was to allow participants to reflect on which aspects of the intervention were useful/not useful in determining their affective teaching and learning strategies and how the intervention had impacted on and been applied to their teaching practices. The workshop presenters shared information relating to the results extracted from the data collected to date. During the workshop, participants were asked to select what they considered to be the five most important strategies within three categories of 'Strategies to enhance affective learning and

teaching' (Category 1 Principles underpinning affective learning/teaching; Category 2 What the lecturer can/should do; Category 3 Classroom methods/activities) and for each category to rank the selected items in order of their priority. For the first category, 'Principles underpinning affective learning/teaching', participants were also requested to put an 'M' next to the item if they believed their meditation practice contributed to the development of the strategy.

With the permission of the participants this workshop was also digitally recorded in order to capture the richness of the discussion. Participants again completed the staff survey based on Stenzel's (2006) 'Rubric for Assessing Learning and Teaching in the Affective Domain' and the GHQ-12 General Health Questionnaire (Goldberg & Williams, 1988) to enable a comparison of responses at the beginning and end of the pilot study, and to allow an assessment of changes in staff mental health status before and after the mindfulness meditation program. The participants also completed the previously administered Harvard One-Minute questionnaire to provide feedback on the workshop and an evaluation questionnaire relating to the project overall that contained the questions:

- How worthwhile or useful, given the time you have invested, was the project for you?
- List the best aspects of the project.
- If there is an opportunity for extending this project, what aspects of the current project would you want to see expanded or improved upon?
- Would you like to be involved with the project if it is expanded?
- Any other comments in relation to this project?

Again, any participants unable to attend the workshop were provided with copies of the presentations and materials/questionnaires that had been distributed.

Stage 4 Data analysis and summarisation

Stage 4 involved analysis of all the data collected. Feedback gathered by the Harvard One-Minute Questionnaire following each workshop and at the conclusion of the project was manually summarised and analysed to determine any emerging themes. The transcriptions of the telephone interviews were also summarised, analysed and categorised according to the emerging themes. Data collected by the GHQ-12 General Health Questionnaire and staff and student surveys were coded and analysed through the Statistical Package for the Social Sciences (SPSS) software (Norusis, 1990) using paired t-tests and a mixed model approach as appropriate.

THE FEEDBACK

This section summarises firstly the data collected from administration of the Harvard One-Minute Questionnaire at the end of each of the three workshops (n=9; n=6; n=5), and secondly the data gathered in relation to the evaluation of the project

overall at the end of the year (n=10). The results of analysing data collected from the staff and student surveys, the GHQ-12 General Health Questionnaire, and the recorded interviews with academic staff are reported elsewhere.

Harvard One-Minute Questionnaire

The majority of academic staff participants found the sharing and open communication within the group and their involvement in discussion in relation to teaching and the affective domain most important. Developing strategies for use in the classroom and exploring the connection between mindfulness meditation and affective learning enabled them to examine how they may modify their teaching practice to influence improved learning by their students. Some participants mentioned that clarification of what constitutes meditation was also useful. One person responded that “everything!” covered in the workshops had been important.

The following comments received in relation to ‘the most important information gained’ indicate that the participants’ gained greater appreciation and understanding of mindfulness meditation and teaching and learning in the affective domain:

The relationship between my own mental wellbeing and the influence this can have on my teaching.

That what I have been doing is OK. The best way to engage students is to be engaged in life itself.

The need to persevere and increase concentration. I now understand better the difficulties with online learning, and the advantage I have with direct contact.

It reaffirmed my faith in meditation and used different strategies to teach in the affective domain. I think I know what I do, however, it allowed me to explore a mix of affective domain.

I was gratified to hear about the student responses, and to hear that their lives and perceptions have been influenced positively.

That meditation takes many forms, however this puts into context that these other forms can be recognised and used to think about teaching affectively.

Evaluation responses cited the ‘best aspects’ of the workshops as the openness and ability to talk freely, share feelings and experiences, and explore thoughts and concepts. The workshops provided academic staff the opportunity to join with others to reflect on their teaching practice. Listening to the experiences of the other participants and having the opportunity to learn from different speakers on various aspects of teaching and learning, and the “warm, friendly” presenters were all reported as beneficial aspects of the workshops. Most academic staff were pleased to gain “the motivation and resources to try meditation” and the opportunity to practice meditation. Their comments included:

It was possible to respond, contribute and share experiences at any stage.

Sharing feelings and what we got out of our changes in life and practice.

Responses to the question asking what information could be included or expanded upon in the future included: “information about knowledge versus wisdom”; advice on how to maintain a meditative attitude; more explanation on support that participants can seek; and a request for a full list of references to allow follow-up of the information. Other suggestions were to include “further get-togethers to discuss and meditate” and “an introduction to different meditation styles. The final question that invited ‘any further comments’ received the following positive responses: This was very timely”; It was a wonderful experience. Thanks.”, “Excellent!”. Participants reported that the workshops were “a very pleasant and valuable way to spend 4 hours” and “a good use of time”.

Project Evaluation Questionnaire

Participants considered the pilot study to be “very worthwhile”, “an excellent project”, “enjoyable” and “very useful” both personally and professionally. Even for those already familiar with the benefits of meditation, making a conscious link between meditation and teaching practice was “insightful”. Involvement in the study allowed the staff to be more reflective of their teaching and more conscious of what they do. Some of the comments received were:

It helped to make me feel more centred and stronger in approaching difficult situations.

The project was very worthwhile. The lasting impact makes it well worth every minute.

The best aspects of the project included the “discussions about meditation and affective learning”, “getting together and sharing feelings and outcomes” and “the meditation itself”. Staff appreciated the opportunities for relaxation and introspection. Some of the responses were:

Practical strategies. Increased knowledge re teaching. Opportunity to share and learn from colleagues.

The project has altered my approach to my teaching, and this may contribute positively to the lives of my students.

The fact that the usefulness of meditative practice is being explored in an academic setting with hopefully the effect that more people can enjoy the benefits meditation such that it becomes a more mainstream technique drawn upon to help us to better understand ourselves.

Other participants reported it was a “good idea to be explored” and that “being part of a research project and being given opportunity to express thoughts” was a significant activity for them.

When participants were asked if there was an opportunity for extending the project, what aspects they would like to see expanded or improved upon, they again suggested more opportunities for sharing and to learn from colleagues; more discussion about meditation and the forms it may take; and more development of practical teaching strategies. Others commented that they “would like to see students go through the same process which may enhance outcomes” and “to have this project extended to a course or regular sessions that could be taken by students’. Almost all (80%) of participants indicated that they would like to be involved with the research if it was extended in the future. The question asking for ‘any other comments’ was generally unanswered by the participants (70%). The responses received were simply “No” and “Thank you”.

CONCLUSION

From a theoretical perspective it is plausible that mindfulness meditation may contribute to affective teaching and learning as mindfulness meditation can contribute to increased concentration and reflection while also developing meta-cognitive awareness. This pilot study conducted at the rural and regional sites of a metropolitan university aimed to investigate the specific technique of mindfulness meditation as a strategy to develop awareness of the importance of the affective domain in teaching and learning and whether engagement in mindfulness meditation by academic staff can contribute to an increase in affective teaching and learning. Academic staff reported that the project had altered their approach to teaching in a positive way with a focus on the affective domain and were grateful for the opportunity to experience meditative practice in an academic setting. They found participation in the pilot study and their involvement in the workshops discussing affective teaching and learning and mindfulness mediation personally valuable and a worthwhile use of their precious time.

The pilot study was limited by the small sample size and self selection of participants. In this context it may be anticipated that self-selected participants in a study of this nature may report positive results. From a practical perspective, mindfulness meditation may only appeal to a small percentage of academics, but amongst these academics benefits may be significant and may impact upon affective teaching and learning. The survey feedback received from the academic staff who participated in this pilot study suggests that mindfulness meditation can play a major role in contributing to affective teaching and learning for some academics. Based on the success of this pilot study and the experience gained, the research team plans to undertake a larger study to be conducted across more than one university. The larger study would further explore whether mindfulness meditation by academic staff promotes affective teaching and improves student learning, particularly in the on-line environment.

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