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Adhering to scientific and ethical criteria for scholarship of teaching and learning

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Abstract
Despite expanding engagement in Scholarship of Teaching and Learning (SoTL), clear guidelines for ethical criteria for SoTL, and the implementation thereof remain limited. In this paper we critically reflect on how the ethics criteria and processes impact on lecturer engagement in SoTL, and we provide suggestions for lecturers, academic developers, and members of scientific and ethics committees on how to support research in teaching and learning, without losing the scholarliness of such research or hindering innovation in teaching. This paper provides a critical reflection on SoTL and ethics. Practical recommendations such as: the adaptation of ethical requirements, consultation between SoTL researchers and ethics committees and acknowledging that SoTL is not purely discipline-specific research, are provided. Taking these recommendations into account may support a better alignment between the ethical application process and the scientific approach of SoTL research.

Keywords: Scholarship of Teaching and Learning, ethics criteria, academic developers, ethics committees**,** teaching and learning

Introduction

Scholarship of Teaching and Learning (SoTL) is the investigation of classroom practice, using systematic and intentional methodology, resulting in scholarly products that can be built upon by colleagues also engaging in SoTL research, according to Linder, Elek, and Calderon (2014). Rowland and Myatt (2013) describe SoTL as the discipline-based, scholarly examination of teaching and learning with an associated dissemination of findings. SoTL enables scholars to reflect on, and transform, teaching and learning practices and thus it forms a bridge between teaching and research (Fung, 2014; Vardi, 2011). Lecturers who engage successfully in SoTL encompass what academic developers (ADs) may see as one of the ultimate results of their professional development process. ADs aim to guide and support lecturers to progress from being good lecturers to scholarly lecturers, and then to academics who actively become SoTL researchers in their classes. A research study conducted by Stockley and Balkwill (2013) reports that lecturers explain that they engage in SoTL with the aim to improve student learning as well as their own teaching practices. However, Stockley and Balkwill (2013) mention a concern regarding lecturers' lack of awareness of research

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ethics guidelines that apply to SoTL research. Lecturers want to try new teaching strategies, involve students in innovative learning activities or adapt their assessment practices to address a specific need in their classrooms. However, recording and reporting on these innovations as research findings changes the scenario from purely scholarly teaching to SoTL. The implications are that SoTL endeavours should adhere to the same ethical and scientific criteria and expectations as subject disciplinary research including a process of proposal writing, clearance by scientific and ethics committees, and producing research outputs (Stockley and Balkwill, 2013).

Despite expanding engagement in SoTL, the body of literature on research ethics is small and diverse, with limited guidelines to manage ethical dilemmas (Healey et al., 2013; Linder et al., 2014). Linder et al. (2014) also report in their article, 'Practicing the Scholarship of Teaching and Learning in an Ethical Manner', that they found very little evidence of guidelines for ethics review of SoTL research in the literature. SoTL's limited history of engagement with questions of research ethics has not gone unremarked in some countries. In the United States for example, Wilson (2008) calls for more guidance on ethical issues to help SoTL researchers. In 2004, Burman and Kleinsasser (2004: 68) note, 'There is scant literature directly addressing ethical practice in SoTL'. Writing in the Canadian context, Stockley and Balkwill (2013: 1) discuss their encounter with SoTL researchers at a Canadian conference '…who, in [their] opinion, were completely unaware of research ethics guidelines that clearly applied to their work'. It should be noted that the Canadian approach to research ethics through national guidelines and local review closely mirrors the Australian experience.

Although it is expected that SoTL research must adhere to the same ethical and scientific criteria as all scientific research, there is on the one side a lack of awareness amongst SoTL researchers regarding ethical guidelines that apply to scholarly research (Stockley and Balkwill, 2013), and on the other side, a lack of understanding of the context of and approach to SoTL research by non-educational ethics committees. In this paper, we discuss the two sides of the SoTL ethics coin, and highlight the implications for both researchers and ethics committees in managing the process. We conclude this paper with recommendations on how the ethical application process can strengthen and not restrict the scientific approach applied in SoTL research.

Critical reflection on SoTL and ethics

Healey et al. (2013) provide a critical reflection on understanding both SoTL and ethics. Although the definitions of SoTL are widely debated, Healey et al. (2013: 24) explain that *SoTL* 'is the process of exploring, researching, developing, refining, reflecting upon, and communicating better ways and means of producing, promoting, and enhancing scholarly learning and teaching in ways that are ethically reasoned and inclusive'. This definition implies that SoTL research affects institutional practice and educational issues that affect human society. This in turn raises the question of what constitutes an ethical SoTL. According to Healey et al (2013) SoTL becomes ethical when scholars display well-developed personal ethical fitness and operate in an ethical climate. SoTL researchers must demonstrate that they have conscientiously and thoroughly considered the ethical

implications of their work, as well as that they have fostered personal ethical reflection in without being prescriptive.

Background and development of SoTL

Initially started in America and promoted by the Carnegie Foundation for the Advancement of Teaching, specifically the Carnegie Academy for SoTL (CASTL) and its presidents (Ernest Boyer, Mary Huber, Lee Shulman), SoTL has taken root in many institutions. CASTL has more than 200 institutions participating in the three-tiered programmes of SoTL. They are the Carnegie Teaching Academy Campus programme, and the CASTL Institutional Leadership Clusters followed by the final phase, the CASTL Institutional Leadership and Affiliates Program. The Loyola Marymount University (LMU) is a good example of an institution which has engaged in and supported SoTL for a number of years. LMU is the coordinating institution for the Affiliates group of the CASTL programme (Hutchings et al., 2011), and has a SoTL department attached to the Centre for Teaching Excellence (CTE) (LMU, 2016). Many educators and researchers at LMU have had their work recognised by CASTL, and New Zealand, the UK, Canada and Europe through the International Society for the Scholarship of Teaching and Learning (ISSoTL) (ISSoTL, 2004).

Inter-institutional collaboration, networking and international conferencing arranged through ISSoTL has resulted in the growth of SoTL in different international locations. The Australian Learning and Teaching Council (ALTC) facilitates, promotes and disseminates research on Higher Education teaching and learning. The Australian Association for Research in Education (AARE, 2012) refers to scholarly inquiry being done. The development of teaching and learning guides and disciplinary networks and fellowships indicates the level of interest in teaching and learning inquiry. Moreover, the expansion of SoTL has been promoted in the UK by the Higher Education Academy (HEA) and can be seen in the growth of disciplinary centres and disciplinary SoTL studies, e.g. health related disciplines (HEA, 2007). Furthermore, the Canadian Journal for SoTL (CJSoTL) advances SoTL in Canadian higher education. Grants for SoTL work are made available throughout Canada to a number of constituencies, special interest groups and fellowships for conferences and publications (STLHE, 2014). It is thus clear that inquiry into educational, disciplinary and interdisciplinary research expanded the SoTL base throughout America, Canada, Europe (including the UK) and Australasia.

The emergence of SoTL in the South African higher education landscape and at South African universities can be formally traced to the 2004 ISSoTL conference where representatives from South African universities were signatories to its founding document (ISSoTL, 2004). Since then, a number of SoTL initiatives have been evident at South African universities. SoTL is supported by the South African Council for Higher Education (CHE) and is recognised as part of professional learning of academics in their role as lecturers (CHE, 2017).

The ethics committees

Even though research ethics guidance has emerged from biomedical fields of study, we recognise that there is a need to acknowledge and manage risks to the participants' well-being in social sciences, behavioural and humanities research. Research ethics exist to ensure the autonomy and well-being of the research participants at every stage of the research process.

Emanuel, Wendler, and Grady (2000) published a list of seven ethical requirements as a framework for clinical research. These requirements are: social or scientific value; scientific validity; fair subject selection; favourable risk-benefit ratio; independent review; informed consent; and respect for potential and enrolled subjects. In need of a framework suitable for the ethics review of health professions education research that specifically takes into account the characteristics of research in this domain, Eikelboom et al. (2012), identified four of Emanuel's principles, (valuable knowledge, respect for participants, beneficence, and justice) which can be used by ethics committees. A number of other publications highlight these principles for research involving human participants, which include respect, privacy, conflict of interest, confidentiality, and risk to benefit analysis (Cleary, Walter, and Jackson, 2014; Healey et al, 2013; Linder et al, 2014; Stockley and Balkwill, 2013; Walters-Adams, 2006).

The difficulty arises when ethics committees create what is perceived by many as obstacles to scientific validity regarding SoTL research (Cleary et al, 2014; Stockley and Balkwill, 2013; Reed, 2007). In some health professional faculties, the disciplinary research processes and the ethical criteria are incompatible with SoTL research, and therefore the SoTL research process is misunderstood and mistrusted (Hally and Walsh, 2016; Reed, 2007). The literature reports that as a result of this misconception regarding SoTL research, institutional ethical clearance is perceived as confusing, time-consuming, too burdensome and not applicable to SoTL researchers' research (Linder et al, 2014; Stockley and Balkwill, 2013). A research design most applicable to SoTL research is an iterative Action Research (AR) approach (Rowland and Myatt, 2013). Most educator development can be described as a quest to improve teaching practices, just as the SoTL can be viewed as a systematic effort to highlight and improve teaching and learning through dialogue and self-reflection which eventually is made public (McKinney and Cross, 2007). The expanded explanation of SoTL by Hutchings, Hubber, and Ciccone (2011) conclude that SoTL is pursued as a kind of action research by teachers in their own classrooms, and include a process of reflections, revisions and actions.

Unfortunately, the rigorous time specific procedures of ethics committees make the implementation of AR difficult. Researchers need to provide all relevant tools, instruments and procedures when applying for ethical clearance before commencing with a project. With AR, the methods, instruments and sometimes even the scope of the research question may be altered as the research unfolds. Any change in the research proposal needs to be approved by the ethics committee beforehand, in essence halting the research process. This may result in SoTL researchers losing the opportunity to gather data as their time with the specific student cohort is limited, and the normal teaching and learning activities need to continue. According to Hutchings et al. (2011), it is important to avoid working strictly according to a set of rules in the application of ethical criteria and instead allow for a process of reflection, self-questioning, and discussion.

There is a movement towards different levels of ethical clearance and separate ethical review processes for classroom research (Linder et al, 2014; Pecorino, Kincaid, and Gironda, 2008) to accommodate both SoTL and ethics requirements. The different levels of ethical clearance which can accommodate SoTL research is described by the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS) (Tri-Council Policy Statement, 2010). TCPS advocates a proportional approach to research ethics review, so that

the level of review is in accordance with the level of risk posed by the research to participants (Tri-Council Policy Statement, 2010). There are three levels of review applicable to studies which include human subjects. They consist of Exemption, Expedition, and Full Review. For example, research may be exempt from ethical clearance when it does not contain data collection methods of a sensitive nature such as reflective essays, personal comments on discussion forums, educational tests, and observations of public behaviour. It is up to the ethics committee to declare which work will be exempted and all appropriate paperwork must be filled in (Hutchings, 2003).

The next possible level is Expedition and is reserved for studies with no more than minimal risks. The review may be carried out by the ethics committee chair or by one or more experienced reviewers. Most SoTL research should fall into this category. However, SoTL researchers should take note that an expedited classification does not necessarily mean speedy, as it still takes time for the designated ethics committee member or the chairperson to work through the full application (Hutchings, 2003). It is still a time consuming process, especially if revisions are suggested or more information is needed (Linder et al, 2014). For studies entailing more than minimal risks, there is a full board review. Studies which will typically fall into this category include: participants that are minors, videotaping participants, and providing some participants with benefits not available to others as in control, or experimental groups. In order for ethics committees to determine under which level of risk projects will be evaluated, it is important to provide sufficient and explicit information regarding all aspects (purpose, scope, voluntary nature of participation, recruitment of participants, informed consent process, data analysis and storage of the data) of the project (Jamrozik, 2004; Linder et al, 2014). In the United States many forms of educational research have been eligible to be declared exempt from review by full Institutional Review Boards (IRBs) (DeVito, 2010). This has included work relating to regular instruction, comparison of educational methods, educational testing, anonymous surveys, anonymous interviews, and anonymous and public behaviour, as well as those studies employing existing, publicly available, or anonymous data. In some countries, such as Australia, the USA and the UK, where research ethics review is only mandated for institutions wishing to be eligible for research council grants, tertiary institutions that are only concerned with teaching may not have review processes in place. This may pose problems for empirical scholars seeking to publish in journals that require evidence of research ethics review as a precondition for publication.

The SoTL researcher

SoTL research is multi-disciplinary in nature and therefore researchers applying for ethical clearance may not have any previous training or past experiences working with ethics committees (Healey et al., 2013; Linder et al., 2014). It is therefore understandable that educational researchers in non-medical fields of inquiry might be confused on how research ethics emerging from biomedical fields of study could be applied to their research. In many cases lecturers conduct research in their classroom and describe it as ‘just trying out something new’ (Stockley and Balkwill, 2013: 1). Yet, that ‘something’ should have included a consent process for the use of student data, or may be research projects that started out as programme evaluation and became research without meeting the criteria of ethically

acceptable research (Stockley and Balkwill, 2013). These lecturers may be unaware of the ethical implications of recording their own research practices with their own students.

Although rigorous information is requested for ethical clearance, Barbour (2001) warns against a list of technical procedures which is too overly prescriptive and which compromises the unique contribution that systematic qualitative research (or any form of SoTL research) can make to teaching and learning. In the following section, we look at the different ethical requirements and the implications they may have for SoTL research.

Dual role of SoTL researcher

One of the significant, and sometimes most misunderstood ethical issues SoTL researchers are confronted with is their dual role of researcher-lecturer, and the resulting relationship of the researcher-lecturer with their students not only as learners, but also as research participants. SoTL inquiry occurs within practitioners' own classrooms. This dual role of most SoTL researchers as both educators and researchers provides a complex scenario when the ethical principles are applied to SoTL (Healey et al., 2013; Reidum, 2014). Many ethics committees question the approach of lecturers 'doing research' on their own students. In SoTL, students are the population within the specific educational context that needs to be researched. They are directly related to the educational problem and thus cannot be excluded from the inquiry (Healey et al., 2013). The lecturer as researcher cannot distance herself from either her teaching or research, thus becoming an 'insider' researcher. This will have a distinct impact on two practical aspects of the research: the protection of the participants (both the students and the lecturers), and the data-gathering process (Healey et al., 2013; Trowler, 2011).

Students as vulnerable population

In SoTL research, the students as research participants are regarded as a vulnerable population. Cleary et al (2014) explains that although generally healthy and clear thinking, students are a vulnerable population due to the power differential between lecturer and students. The concept of vulnerability in research was developed from the medical perspective, with patients being regarded as highly vulnerable. However, students are less dependent on teachers than patients are on doctors, and harm and disadvantage may therefore differ as the risks involved in education research are arguable less than associated with medical research (Eikelboom et al., 2012). Possible risk must therefore be weighed against the need to assess the effectiveness of teaching and learning (Linder et al., 2014). The power relation between student and educator/researcher places the responsibility on the more powerful person (the educator/researcher), to act in the best interest of the other party in the power hierarchy. The concern is also raised regarding the dual role of researcher-lecturer, where there is a dual focus on improved teaching and learning and research output. The nature of the relationship with the participants is such that lecturers cannot be totally objective and it may influence both the teaching process and the research process.

Conflict of interest

To manage conflicts of interest during data gathering, ethics committees suggest that lecturers make use of outside or independent researchers to communicate with the students

and to gather the data (Cleary et al., 2014). However, in SoTL research, establishing and maintaining rapport between lecturers and students is a central part of the research endeavour. Healey et al. (2013) warn of loss of critical information and understanding when outsiders gather data. On the other hand, the power relation between students and the lecturer may influence the research. Students may provide inaccurate responses to the research question or provide answers they assume the researcher wants to hear, which will undermine the integrity of data and the project findings. It is with this in mind that Cleary et al. (2014) suggest that ideally data should be gathered by an outsider.

Anonymity and confidentiality

A further primary issue, raised by the insider researcher position, is the participant's right to privacy, which includes anonymity and confidentiality (Bischop-Clark and Dietz-Uhler, 2012). Hutchings (2003) asks the question of how private the work which is generated in class is. She explains that the boundaries of the traditional classroom have become transparent with the development of electronic classrooms and other collaborative and cooperative pedagogies. Is it possible and reasonable to expect the researcher to guarantee anonymity when using classroom-generated work for data collection? In the teaching and learning environment, the lecturer and the students become familiar with each other. This familiarity may further compromise the requirements for anonymity in research. An idealised view of anonymity is that a person will never be traceable from the data presented about them. However, guaranteeing complete anonymity to participants can be an unachievable goal in SoTL research, especially where qualitative research is used. Some commentators argue that since the primary researcher (in this case the lecturer) knows who the participants are, true anonymity is by definition never achievable as there will always be at least one person with access to participant information (Clark and McCann, 2005; Cleary et al., 2014).

Replacing the lecturer as interviewer or facilitator for focus group interviews may protect the students from being recognised, but as explained earlier, critical data may be lost if an outsider gathers the data. The lecturer, as primary researcher, knows the research context and questions, and will be able to act on cues during the interviews that may be missed by another interviewer. However, students may feel uncomfortable discussing the lecturer or their class experience and may not disclose relevant information due to the lack of privacy and anonymity. The academic developer can play an important role here in supporting the lecturer in her SoTL research endeavour. The academic developer can function as an independent co-researcher, providing valuable support in data gathering and communicating with students, while also bringing expertise from an educational background to the project.

Research activities versus teaching activities

In many cases of SoTL, research activities and learning activities are one and the same. Ethics requires researchers explain clearly what activities are research-related and what are teaching and learning activities so that students could have a choice in participating in the research activities (Bishop-Clark and Dietz-Uhler, 2012), but this is not always so clear cut in practice. The reason for this separation of research from learning activities is to allow students a choice in participation. Rowland and Myatt (2013) explain that students who do

not agree to participate in the research cannot be included in the study population, but they must still be allowed to participate in the learning activity if it is part of their curriculum and/or likely to improve their learning. This is quite easy to apply when students are invited to complete a questionnaire or to participate in interviews. However, in SoTL research, formal teaching and assessment may form part of the data. For example, how do you exclude a student as research participant when you observe student engagement in group-work activities? An issue that needs further investigation is the reason why students might not want to allow data from their learning activities to be used for research – what would be their motivation? Who are the students who choose not to participate? Are they not part of a group whose voices should actually be heard?

To further protect students as vulnerable participants, ethics committees suggest that data should be gathered after formal teaching and assessment have taken place as valuable teaching and learning time is lost if data collection is conducted during the class time. The debate is whether the little time spent on data gathering in the context of the whole semester of teaching time is really such a serious ethical issue, when considering the potential loss of data when gathering data outside of class time. Cleary et al. (2014) report in their study on considerations when including students as research participants that student participation dropped significantly when they tried to gather data in separate organised sessions outside the formal teaching time. This resulted in problems with too small sample sizes or not being able to reach data saturation, impacting on the credibility of the data. Informal discussions with students, as reported by Cleary et al. (2014), also proved that the lack of participation was not always due to students having ethical issues with the research per se, but because they were just not interested or motivated enough to put in the effort to attend the data-gathering sessions. This supports the previous comment on whose voice is heard in SoTL research. Is it the motivated self-directed student who is more inclined to participate? What about the struggling student, the discouraged student or even the introvert who will be less inclined to participate? How will their data influence the research? Cleary et al. (2014) further explain that students do not see the direct benefit of new or improved innovative learning and this may result in them not realising the importance of the SoTL research.

Research design

A point that is raised time and again by scientific and ethics committees is the use of control groups. Grauerholz and Zipp (2008) explain that it becomes an ethical issue when the researcher strongly suspects that a particular approach or method helps students learn more effectively. Is it ethical to have one group of students experience the improved teaching approach and not the other? Suggestions of implementing a cross-over research design may be impractical in a short semester. Also, control group conditions are difficult to enact in the complex world of the classroom (Hutchings, 2003). A suggestion is to compare data on student performance with a previous year's students, but how comparable are these two groups? Grauerholz and Zipp (2008) recommend that the researcher must establish that the group of students and courses themselves are comparable in terms of student demographics and curriculum. Apart from that, there may have been other factors that influenced student performance in previous years that influences the validity of the data. SoTL researchers will

have to motivate their choice of research design clearly from an educational perspective to ethics committees.

Sampling process and recruitment

The sampling process in SoTL research may also prove to be controversial. As explained in the previous paragraph, students should participate voluntarily in the research process. This may result in a biased sample, as it is usually the more positive and higher achieving students who volunteer for additional activities. Pearson, Albon, and Hubball (2015) suggest that SoTL researchers make use of purposive sampling as it offers a degree of control rather than being at the mercy of any selection bias. Although SoTL researchers still need to go through the process of obtaining informed consent from the sample of students, with purposive sampling researchers deliberately seek to include 'outliers'. Another potential problem for SoTL researchers is sample size. Grauerholz and Zipp (2008) explain that many SoTL manuscripts are rejected for publication due to an insufficient sample size. As a rule, reviewers prefer to see sample sizes of at least 50 for quantitative studies or 24 for qualitative studies. In reality, sample size in SoTL research is determined by students' voluntary participation and commitment to the research process (Grauerholz and Zipp, 2008). In other social science research, a researcher may continue inviting potential participants from a usually larger population until an acceptable sample size is achieved. In SoTL research, there may not be other students who can be recruited, as the population may be only that specific cohort or class in which the research study is conducted.

Incentives

The issue of student participation brings us to the question of incentives. Students are usually not interested in SoTL research as they feel it does not have an impact on them, as most research activities do not count towards their final marks. Awarding incentives via extra course credits for participation has been questioned on both ethical and research grounds and should be avoided. Financial incentives to participate are viewed as coercive, as student income is often limited, and thus incentives should not be unusually high (Cleary et al., 2014; Healey et al., 2014). Awarding incentives to students who participate in the research should be in line with the time and effort they spent on the research, and should rather be considered as a token of appreciation.

The lack of awareness regarding ethical guidelines amongst SoTL researchers who apply for scholarly research leads to delays in ethics reviews, frustration on the part of researchers and sometimes even resentment towards ethical review committees (Stockley and Balkwill, 2013). Refusing to adhere to ethics principles has serious consequences for SoTL researchers, who need to be aware of the following: many journals will not publish research without ethical clearance, because if anything happens during the study that affects participant welfare, the researcher has no protection from the institution. Furthermore, neglecting to get ethical clearance affects access to grants and promotion. Similarly, conducting research without ethics approval may damage the researcher's reputation as well as the reputation of the institution and that of fellow researchers (Stockley and Balkwill, 2013).

Practical recommendations for SoTL researchers

In this article we provide practical recommendations to support SoTL researchers to better manage the ethical implications of their research. Classroom research is a crucial component to fostering our knowledge about how students learn and to better understand effective classroom practice. There are several ethical issues in SoTL to consider: firstly, students as vulnerable groups; secondly, the insider position and power invested in the lecturer as researcher; and lastly, the confidentiality and anonymity of data collection and consequently processes required by ethics committees may have a negative impact on SoTL research. Moreover, legal and ethical requirements for medical research on humans, and educational research may differ in formulating and applying guidelines for SoTL research, thus ethics committees may not have the specific expertise needed to review SoTL studies.

The following recommendations are made to provide suggestions for lecturers, ADs, and members of scientific and ethics committees on how to support research in teaching and learning, without losing the scholarliness of such research:

- Revise and adapt ethical requirements for SoTL research. Ethical requirements should inform but not determine research designs.
- Consultations and discussions between SoTL researchers and ethics committee members prior to ethics applications can help with aligning ethical requirements with the scientific methodology of SoTL.
- Ethics committees should acknowledge and accept that SoTL research may not be the same as discipline-specific research.
- SoTL researchers should negotiate for an expedited process after the initial full-review in follow-up processes to accommodate the nature of AR.
- Appoint members on the ethics committees with specific knowledge and expertise of educational research, or create a dedicated ethics research board for the review of SoTL research.
- SoTL researchers should write clear proposals to inform ethics committees in detail and prevent misunderstanding or raise further questions.
- ADs should team up with SoTL researchers to provide educational expertise and to act as independent co-researchers.

Conclusion

Educational research, including SoTL, has similarities and differences with other disciplines (Cleary et al., 2014; Eikelboom et al., 2012; Healey et al., 2013; Stockley and Balkwill, 2013). ADs have an important role to play, especially in work concerning SoTL and ethical clearance application. It is the role of the ADs to ensure that educators are aware of the need for research ethics review of their projects involving human participants. Guidance from the ADs can assist the researcher in reflecting on aspects such as: the dual role of the SoTL

researcher, students as vulnerable population, conflicts of interest, anonymity and confidentiality, research-related versus teaching activities, research design, sampling processes and incentives. SoTL researchers will need to make an effort in motivating their approach to research from a scientific as well as an ethical view. The challenge is to adhere to ethical requirements without losing the uniqueness of SoTL research or compensating on scientific rigour. Taking these practical recommendations into account may support a better alignment between the ethical application processes and the scientific approach of SoTL research.

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References

Barbour, R. S. 2001. Checklists for improving rigour in qualitative research: A case of the tail wagging the dog*? British Medical Journal,* 322: 1115-1117.

Bischop-Clark, C., & Dietz-Uhler, B. 2012. *Engaging in the Scholarship of Teaching and Learning: A guide to the process, and how to develop a project from the start to finish.* Virginia: Stylus Publishing.

Burman, ME & Kleinsasser, A.M. 2004. Ethical guidelines for use of student work: moving from teaching's invisibility to inquiry's visibility in the scholarship of teaching and learning. *The Journal of General Education*, 53(1): 59-79.

CASTL. 2016. Carnegie Academy for the Scholarship of Teaching and Learning. Online at http://archive.carnegiefoundation.org/scholarship-teaching-learning (accessed 19 January 2016).

CHE. 2017. Learning to teach in Higher Education in South Africa. An investigation into the influences of institutional context on the professional learning of academics in their roles as teachers. CHE: Pretoria.

Clark, E., & McCann, T. V. 2005. Researching students: An ethical dilemma. *Nurse Education*, 12(3): 42-51.

Cleary, M., Walter, G., & Jackson, D. 2014. Above all, 'do no harm': Key consderations when including students as research participants in higher education settings. *Contemporary Nurse*, 49, 93-95.

DeVito, S. 2010. Experimenting on law students: Why imposing no ethical constraints on educational research using law students is a bad idea and proposed ethical guidelines. *Southwestern Law Review*, 40, 285-321.

Eikelboom, J. I., Ten Cate, O. T. J., Jaarsma, D., Raat, J. A. N., Schuwirth, L., & Van Delden, J. J. M. 2012. A framework for the ethics review of education. *Medical Education*, 46, 728-737.

Emanuel, E. J., Wendler, D., & Grady, C. 2000. What makes clinical research ethical? *Journal of the American Medical Association*, 283, 2701-2711.

Fung, D. 2016. Strength-based scholarship and good education: The scholarship circle. *Innovations in Education and Teaching Internationa*l. DOI: 10.1080/14703297.2016.1257951.

Grauerhoz, L., & Zipp, J.F. 2008. How to do the scholarship of teaching and learning. *Teaching Sociology*, 36, 87-94.

HEA. 2007. Issues and news on learning and teaching in medicine, dentistry and veterinary medicine. *The Higher Education Academy*. Online at http://www.medu.vac.uk (accessed 13 July 2017).

Healey, R. L., Bass, T., Caulfield, J., Hoffman, A., McGinn, M. K., Miller-Young, J., & Haigh, M. 2013. Being ethically minded: Practising the Scholarship of Teaching and Learning in an ethical manner. *Teaching and Learning Inquiry*, 1(2): 23-33.

Hutchings, P. 2003. Competing goods: Ethical issues in the Scholarship of Teaching and Learning. *Change*, Sept/Oct, 27-33.

Hutchings, P., Hubber, M. T., & Ciccone, A. 2011. *The Scholarship of Teaching and Learning reconsidered: Institutional integration and impact*. San Francisco: Jossey-Bass.

ISSoTL. 2004. The Scholarship of Teaching and Learning: Perspectives, Intersections and Directions. Online at http://www.issotl.indiana.edu/issotl/04/overview.html (accessed 30 July 2014).

Jamrozik, K. 2004. Research ethics papwerwork: What is the plot we seem to have lost? *Education and Debate*, 329.

Linder, K. E., Elek, E. D., & Calderon, L. 2014. SoTL and the institutional review board: Considerations before navigating the application process for classroom research in higher education. *Journal of the Scholarship of Teaching and Learning*, 14(2): 1-4.

McKinney, K., & Cross, P. 2007. *Enhancing Learning through the Scholarship of Teaching and Learning: The challenges and joys of juggling.* San Francisco: Jossey-Bass.

Pearson, M. L., Albon, S. P., & Hubball, H. 2015. Case study methodology: Flexibility, rigour, and ethical considerations for Scholarship of Teaching and Learning. *The*

Canadian journal for the Scholarship of Teaching and Learning, 6(3). Online at http://ir.lib.uwo.ca.cjsotl_rcacea/vol6/iss3/12 (accessed 13 July 2016).

Pecorino, P. A., Kincaid, S., & Gironda, B. 2008. Research and experimentation in teaching effectiveness: The ethical review process and the IRB. *International Journal for the Scholarship of Teaching and Learning*, 2(1): 1-11.

Reed, K. 2007. Bureaucracy and beyond: The impact of ethics and governance of health research in the social sciences, 12(5): 89-98. Online at http://www.socresonline.org.uk.15/5/18html (accessed 13 July 2017).

Reidum, T. 2014. Balancing ethics and quality in education: The ethical matrix method. *Scandinavian Journal of Educational Research*, 58(6): 678-694.

Rowland, S. L., & Myatt, M. P. 2013. Getting started in the Scholarship of Teaching and Learning: A 'how to' guide for science academics. *Biochemistry and Molecular Biology Education*, 42(1): 6-14.

Stockley, D., & Balkwill, L. 2013. Raising awereness of research ethics in SoTL: The role of educational developers. *The Canadian journal for the Scholarship of Teaching and Learning*, 4(1).

STLHE. 2014. Society for Teaching and Learning in Higher Education: History and Context. Online at http://www.stlhe.ca/sotl/what-is-sotl/history-context/ (accessed 11 June 2014).

Tri-Council Policy Statement. 2010. *Ethical conduct for research involving humans 1998. Natural Sciences and Engineering Research Council of Canada.* Canadian Institute of Health research. Public Works and Goverment Service.

Trowler, P. 2011. Researching your own institution. British Educational Research Association. Online at http://www.bera.ac.uk/researchers-resources/publications/researching-your own-instituion-higher-education (accessed 13 July 2017).

Vardi, I. 2011. The changing relationship between the Scholarship of Teaching (and Learning) and universities. *Higher Education Research & Development*, 30(1): 8-29.

Walters-Adams, S. 2006. Action Research in Education. Online at http://www.edu.plymouth.ac.uk/resined/actionresearch/arhome.htm (accessed 13 July 2017).