

ETHICAL DILEMMAS ASSOCIATED WITH HYPER-STRUCTURED STUDENT RESEARCH PROJECTS

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ABSTRACT

The growth in the number of students engaging in research as part of their studies has increased dramatically and, combined with the need to provide adequate research supervision, the exploration of alternative modes of conducting research together with students has emerged. One such mode of research can be called the hyper-structured student research project (HSSRP). This mode represents supervision where the research area, as well as the methodology, is specifically defined, and where students are supported and guided through every step of the research process, with the supervisor making most of the important research decisions on behalf of the students. Although the HSSRP has delivered on the institutional requirements of efficiency and throughput, there is a need to critically reflect on these projects to ascertain whether they meet academic and professional requirements. In this article, the acceptability of HSSRP projects will be analysed from a utilitarian perspective, considering dilemmas that may arise from, but also within such projects, and focusing on the public worth which follows from such projects. Several new insights have arisen from these analyses, and it has been found that the level of public worth of the HSSRP might be less than when more traditional modes of supervision are used. It may be concluded that the higher level outcomes, such as gradueness and professional preparedness, are not achieved through the HSSRP. This article presents an evaluation of the HSSRP from a multi-dimensional utility perspective and contributes to a debate often driven by self-serving bias and limited utilitarianism. This broader understanding of HSSRP can advance research through influencing the design of structured research projects so as to permit a more even distribution of utility and to support universities in delivering to a greater extent on their societal higher goals.

Keywords: postgraduate, supervision, research projects, research ethics, utilitarianism

INTRODUCTION

The massification model of higher education places strain on academics as enrolments increase while the number of academics and available resources remain static or even decrease (Boyd and Smith 2016; Hornsby and Osman 2014; Albertyn, Machika and Troskie-de Bruin 2016). At postgraduate level, increases in the student-academics ratio may influence both the quality of researchers being trained and the merit of the research produced (Boehe 2016). Moreover,

further demands are placed on academics to deal with both an increased focus on postgraduate pedagogy (Lee and Green 2009) and the greater-than-before theorising of supervision (Manathunga 2005). This comes in addition to rising concerns over attrition rates. As regards postgraduate students in South Africa, fewer than 50 per cent complete their studies within seven years (Cloete, Mouton and Sheppard 2015). The problem of the “all but the dissertation” phenomenon, where students complete the theoretical part of their studies but do not complete the research component (Blum 2010), seems to be applicable to the South African situation as well. The emphasis that institutions place on throughput rates may thus be warranted, but may also be causing the watering down of research quality, originality and scholarship (Croussard 2013; Boehe 2016; Waghid 2015). In general, massification has led to broad concerns about the dilution of knowledge creation and the quality and type of knowledge being produced (Hornsby and Osman 2014; Brodin 2015).

Hyper-structured student research projects (HSSRPs) have evolved in an era in which academics are searching for alternative models of supervision (Wilson-Strydom 2016). Supervisors may follow the HSSRP route with the aim of managing large numbers of students, supporting students with a low ability to do independent research, or attaining specific supervisor-centred research agendas. However, research projects (including HSSRPs) do not revolve exclusively around supervisors’ needs. Student research projects are associated with the students concerned obtaining degrees (Blum 2010), as well as with universities receiving funding, doing ethical research, educating students and preparing them for careers. Ultimately, students’ research projects are inextricably linked with the social value/public worth that go hand-in-hand with all of these elements (Cloete et al. 2015). In alignment with the last-mentioned, Evans (2014) emphasises the need for transferable skills beyond the qualification.

In this article, the utility of the HSSRP will be assessed. This will be done by presenting an explanation of what the HSSRP is, followed by the set guidelines on what regulators suggest should be achieved through a research project. The next matter to be discussed will be the theory of utilitarianism – and it is by this theory that the outcomes of the HSSRP will be judged, focusing primarily on the societal goals. The article will conclude with some suggestions on how to secure the benefits of hyper-structured projects and still produce students with high levels of graduateness. This entails adjustments to the present format of HSSRP and will lead to educational and research outcomes which are more equitable.

THE HYPER-STRUCTURED STUDENT RESEARCH PROJECT

Universities, departments and individual supervisors have different approaches to student research projects (Boehe 2016). These approaches vary in the degree to which demands are

placed on the student and the amount of initiative, ability and effort the student needs to demonstrate. Students' engagement with their research is essential to their learning, with students seeking alignment with the research and excelling when they view it as a key component of their work or professional identity (Burke and Hutchins 2007; Reid and Petocz 2004). This does, however, raise difficulties when dealing with postgraduate research students in a business school environment. These are mainly mature students who enrol to increase their capital currency (Engebretson et al. 2008) and to attain workplace skills. In general, they are not studying to attain the research skills required for academic careers (Albertyn, Van Coller-Peter and Morrison 2017). More so than other students, students in business-related programmes are motivated by expediency drivers (Alauddin and Ashman 2014) and the vocational utility of their studies (Tymon and Batistic 2016). Hopwood (2010), for example, explains that people engage in certain activities because they can see the value of such activities. In this light, trying to instil a sense of vocational worth seems to be warranted when dealing with students' research projects (Albertyn et al. 2017). Students want to take ownership of their own learning (Beqiri, Chase and Bishka 2010) and want to develop it in line with their personal goals (Eneau 2008). Burke and Hutchins (2007) echo this and state that the transfer and sustained application of learning is directly linked to the students' perceptions of the value and utility of what they learn.

In some business schools, students are free to use consultants to assist them in their research tasks, while in others students are required to do all their tasks independently. This type of variance is also observed in business schools regarding the so-called "power distance" (Hofstede 2001) between student and supervisor. Shared responsibility, as well as respect for the inputs of the student, seems vital to constructive and creative knowledge production (Brodin 2015). The level and type of communication between student and supervisor are also affected by power distance. Pata (2009), for example, states that interaction, particularly feedback from students, is important when students learn the skills of research. Feedback provides indications of what is valued in a scholarly community (Basturkmen, East and Bitchener 2014) and supportive feedback increases the perception of the efficacy of training (Burke and Hutchins 2007). This feedback may be limited when power distance is high, and power distance may vary in accordance with the mode of supervision.

The amount of guidance that supervisors provide and the level of choice students have in determining the topic of their research may vary. The Figure 1 presents a scheme as to how structure may be materialised in research projects, according to the amount of guidance given and the selection of a topic or theme.

		Topic or theme	
		Selected by student	Determined by university
Method	Very specific and instructional – coaching	B Method-based approach	D University-based approach
	Open and negotiated – mentoring	A Student-centred approach	C Theme-based approach

Figure 1: Approaches to student research projects (Source: Author)

The first approach is called the student-centred approach (A). Here, the student selects a topic and negotiates the approach to follow to complete the project. This may imply a utopian approach, where students have the intellectual capability to select a topic and where there is a pool of supervisors able and willing to investigate any problem from any perspective. There may be also be several variations to this approach. For example, the student may select a university or supervisor based on the theme he or she is researching (A+C) or may select a supervisor based on the type of guidance provided (A+B). It may even be possible to have a mix of the aforementioned (A+D). The emphasis with the student-centred approach is on the student having the means to make these choices.

The method-based approach (B) relates to the preferred method of solving problems. The method chosen may be very specific to the supervisor, but may also be embedded in the department or the university. Universities, but more likely departments, develop reputations as to the ways in which they perceive the world and as to their ways of describing the world. A student in such a department, or such a university, may have bought into that paradigm and may be able to solve all problems using the methodology concerned. However, the situation may be different for students not familiar with the paradigm.

The theme-based approach (C) relates to a situation in which a department or university decides to investigate certain problems, but not others, and in which students may still negotiate how they want to solve these problems. Once again, this approach depends on supervisors being willing to guide students using different methodologies and also on their having the ability to do so. The theme-based approach is often linked to research focus areas.

The university-based approach (D) is centred on predefined objectives and methodologies. At university level, this approach may be linked to a philosophy, a research focus area, or to grants (enrolling students to work on the project), and to a specific methodology. On a micro-level (the supervisor level) it may therefore be stated: “this is my topic and this is my method”. The HSSRP falls into this category, with students having little discretion as regards any aspect of the research, apart from deciding to enrol for the project.

A “picture” of the HSSRP is presented next. In this project the supervisor typically identifies and leads a macro-project in which both senior postgraduate students (PhD-level; working on secondary meso-projects) and junior postgraduate students (Masters-level; working on tertiary micro-projects) are involved. The supervisor divides the macro-project into complementary and hierarchically distinguishable building blocks (individual research projects/topics), where individual students can select/compete for one of the available projects, and use this as the title of their dissertations or theses, thus aligning their research with a largely predetermined programme. Apart from the topic being provided, a hyper-structured quantitative research project may have several other characteristics:

- Literature alignment: To assure alignment with the umbrella theme, the supervisor needs to provide very specific guidance to the student. This could then imply guidance on the literature within which the research should be grounded, including directing the student to seminal works and preferred journals.
- Methodological similarity: The methodology is predetermined and, while not necessarily similar for each student, it is stipulated. Students are informed as to what methodology to follow – specifically what data to collect, what instruments to use, and how data should be analysed. This methodological structure is necessary to accommodate the meso and macro-level analyses and to allow the integration of the overall project.
- Centralised ethical clearance: As initiator or guardian of the project, the supervisor acts as the principal investigator for the project. Accordingly, he or she needs to secure the appropriate ethical clearance for the project, often before students are enrolled. Students are then enrolled and inducted into the project and do not apply individually for ethics clearance.
- Defined report writing: Even at reporting level, alignment is needed, as higher level research reports will fail, or will at least be more difficult to produce to an acceptable standard, if lower level reports are formatted differently. If there is no unity in the report writing, higher-level analysis is not possible. This applies primarily to empirical results, but even literature for literature reviews may be “harvested” from the reports produced at lower levels.
- Group supervision: As several students are enrolled for the same project at the same time, similar information needs to be disseminated to all of them and students are in a position to learn from the mistakes of their colleagues. This provides an opportunity for the supervisor to meet students in groups to provide general guidance and formative feedback,

maybe directed to only one project, but which may benefit students involved in complementary projects.

- Higher-level research outcomes: Given that the topic of the macro-project is achieved through the integration of substantial subordinate projects, this outcome will be of a higher order than free-standing traditional student-directed projects. Higher level outcomes are also attributed to the pooling of data in HSSRPs, increasing sample size, where students collect data beyond the scope of their topic and share that data with peers, also with more senior researchers, and ultimately with the principal investigator. Higher level outcomes may also stem from the selection of the overarching goal of the project, which should be at a more strategic level than the goals pursued by individual students with limited resources. It may thus be assumed that, in general, the contribution of the HSSRP to the body of knowledge is superior to that of freestanding individual student projects.
- Threat of plagiarism: Should plagiarism be defined as taking someone else's ideas and presenting them as one's own, then the reports following from HSSRPs may be at risk here. This is because the primary idea and method selection are those of the project leader. Also problematic is that many aspects of the reports created will (naturally) overlap and students may be tempted to copy the work of their peers. This may result in work appearing to be plagiarised or, at least, might deliver tests of similarity yielding unacceptable scores.
- Disproportional commitment, responsibility and liability for outcomes: The principal researcher has an embedded interest in completing the project, and therefore accepts many responsibilities – such as maintaining quality standards when collecting data and subscribing rigorously to the ethical guidelines – more so than may be the case in other projects where the onus lies on the student and where the risk is limited to that specific individual's reputation. From a student perspective, this may result in disengagement from the project or may lead to students mechanically following instructions.

From most of the aforementioned it should be clear why many postgraduate business school students, as well as supervisors, may be drawn to the HSSRP. However, Sinclair, Barnacle and Cuthbert (2014) warn that self-monitoring and managing the challenges posed by the research in an individualised way are imperative to the successful development of a researcher. Edwards (2011) further states that collectively engaging with the research, plotting a vision for the research, and creating reciprocal value for all parties, contributes towards successful research. As such, personal engagement by students will contribute to positive perceptions and attitudes

towards the research (Evans 2011). On the contrary, dependent students, as those who may be created through the use of HSSRPs, tend to have problems with the conducting of later research (Blum 2010). As such, learning interventions need to be designed to provide adequate practice and feedback (Burke and Hutchins 2007), rather than perpetuating dependency.

Despite some obvious limitations, the HSSRP has proved to be well-accepted at institutional level (Peterson 2017), even being applauded and receiving awards for its excellence. This may be so because the traditional, private, one-on-one thesis writing exercise (Manathunga 2005) may be under threat in the age of massification. However, it is also vital to explore instructional principles associated with robust learning (Walkington 2013). In the next section, institutional requirements of higher degrees are presented as a possible way to evaluate the HSSRP.

GUIDELINES ON WHAT SHOULD BE ACHIEVED WITH A STUDENT RESEARCH PROJECT

There are many parties which have stakes in student research projects. These may be divided into individual, organisational and societal stakeholders. Individuals may include the specific student, other students, the supervisor, the supervisor's peers, grant holders, the grant provider, heads of department, deans and rectors. At organisational level, it may be the research team, the department, the faculty, the university, funders and funding agencies, as well as the government. The general public, tax-payers, international grant providers, and society at large, all have a stake in the outcomes associated with postgraduate research projects. It is therefore foreseeable that each of these parties might have a view on the HSSRP.

It would be impossible to list all the outcomes expected from all parties, but it may be useful to use the level descriptors as stipulated in the "Level Descriptors for the South African National Qualifications Framework" (South African Qualifications Authority 2012) as ideal outcomes of student research projects. Much like the "[A] Framework for Qualifications of the European Higher Education Area" (Bologna Working Group 2005, 69), as proposed in the Bologna Declaration, these descriptors specify the types of learning outcomes and assessment criteria that are appropriate to a particular qualification level (South African Qualifications Authority 2012). It provides a basis for more specific, discipline or profession-based descriptors, as influenced by field-, discipline- and context-specific nuances (South African Qualifications Authority 2012). The "level descriptors provide a broad indication of learning achievements or outcomes that are appropriate to a qualification at that level" (South African Qualifications Authority 2012, 5). It could be these broad and higher-level outcomes that might be used when assessing the success of a particular learning programme. It is also important to

note that “the competencies listed at a particular level in the framework broadly describe the learning achieved at that level, [and an] individual learning programme may not necessarily [be required to] meet each and every criterion listed” (South African Qualifications Authority 2012, 5).

Ten categories of level descriptors are used to describe applied competencies across each qualification level (South African Qualifications Authority 2012). These are Scope of knowledge; Knowledge literacy; Method and procedure; Problem solving; Ethics and professional practice; Accessing, processing and managing information; Producing and communicating of information; Context and systems; Management of learning; and Accountability (South African Qualifications Authority 2012). The level descriptors set for Level 10 (doctoral level outcomes) are presented below (South African Qualifications Authority 2012, 11–13):

1. “*Scope of knowledge*, in respect of which a learner is able to demonstrate ... expertise and critical knowledge in an area at the forefront of a field, discipline or practice; and the ability to conceptualise new research initiatives and create new knowledge or practice.”
2. “*Knowledge literacy*, in respect of which a learner is able to demonstrate ... the ability to contribute to scholarly debates around theories of knowledge and processes of knowledge production in an area of study or practice.”
3. “*Method and procedure*, in respect of which a learner is able to demonstrate ... the ability to develop new methods, techniques, processes, systems or technologies in original, creative and innovative ways appropriate to specialised and complex contexts.”
4. “*Problem solving*, in respect of which a learner is able to demonstrate ... the ability to apply specialist knowledge and theory in critically reflexive, creative and novel ways to address complex practical and theoretical problems.”
5. “*Ethics and professional practice*, in respect of which a learner is able to demonstrate ... the ability to identify, address and manage emerging ethical issues, and to advance processes of ethical decision-making, including monitoring and evaluation of the consequences of these decisions where appropriate.”
6. “*Accessing, processing and managing information*, in respect of which a learner is able to demonstrate ... the ability to make independent judgements about managing incomplete or inconsistent information or data in an iterative process of analysis and synthesis, for the development of significant original insights into new, complex and abstract ideas, information or issues.”
7. “*Producing and communicating information*, in respect of which a learner is able to demonstrate ... the ability to produce substantial, independent, in-depth and publishable work which meets international standards, is considered to be new or innovative by peers, and makes a significant contribution to the discipline, field, or practice; and the ability to develop a communication strategy to disseminate and defend research, strategic and policy initiatives and their implementation to specialist and non-specialist audiences using the full resources of an academic and professional or occupational discourse.”
8. “*Context and systems*, in respect of which a learner is able to demonstrate ... an understanding of theoretical underpinnings in the management of complex systems to

- achieve systemic change; and the ability to independently design, sustain and manage change within a system or systems.”
9. “*Management of learning*, in respect of which a learner is able to demonstrate ... intellectual independence, research leadership and management of research and research development in a discipline, field or practice.”
 10. “*Accountability*, in respect of which a learner is able to demonstrate the ability to ... operate independently and take full responsibility for his or her work, and, where appropriate, lead, oversee and be held ultimately accountable for the overall governance of processes and systems.”

These level descriptors are ambitious, or at least very optimistic, not unlike those stipulated in the “[A] Framework for Qualifications of the European Higher Education Area” (see 69; Bologna Working Group 2005). It is worth noting that for some masters degrees, such as the Masters of Business Administration, research forms only part of the qualification, whilst for other degrees, the dissertation forms the corpus of the degree. For most doctoral degrees awarded in South Africa, research and the research report constitute the only outcomes assessed (Cloete et al. 2015). Therefore, in the case of some degrees, certain of the outcomes should be achieved through the research project, and in other cases, all the outcomes need to be achieved through the research project. The aforementioned nuance should be considered when evaluating different approaches to research projects. It may be asked, by way of example, whether a student exposed to a hyper-structured research project would, with regard to level descriptor “method and procedure”, be able to demonstrate “the ability to develop new methods, techniques, processes, systems or technologies in original, creative and innovative ways appropriate to specialised and complex contexts”.

THE CLASSICAL UTILITARIAN PERSPECTIVE

Meeting or not meeting the SAQA requirements may not be a sufficient criterion for evaluating an HSSRP project. The unit standards provide only a standard, but not a way of measuring the worth of achieving that standard. Classical utilitarianism (Bentham 1789; Mill 1879), as proposed by Jeremy Bentham (1748–1822) and John Stuart Mill (1806–1873), provides a means for such a judgment (Driver 2014). The theory states, in essence, that the sum of the good (pleasure or happiness) a specific approach provides should be used to judge its value (the hedonistic principle). Should the pleasure provided by an HSSRP be greater than that derived from other approaches, this would be a good thing – but how would pleasure be measured? Fortunately, classical utilitarianism provides a means to calculate the value of a particular action, using the felicific calculus (Crimmins 2018). According to this, pleasure can be broken down into seven components:

- Intensity: High pleasure, for instance +10, and high pain, for instance -10.
- Duration: Measured in time – how long will the pleasure or pain last?
- Certainty: The odds of the action leading to the particular pleasure or pain. These odds may range from 0 to 100.
- Propinquity: This relates to the time between the action and the pleasure or pain which will follow.
- Fecundity: This has to do with the possibility of reproducing the pleasure (pain) at a later stage, or even of gaining more pleasure (pain) from the same action.
- Purity: Purity deals with the cost endured in attaining the pleasure. The effort (dolors – pain) compared to the outcome (hedons – pleasure).
- Extent: The number of people who share in the pleasure (pain).

Calculating the value of a particular action may be difficult (Edgeworth 1881), but the felicific calculus provides a starting point. An important element of the utility model is embedded in the last-mentioned component of the felicific calculus, namely extent. This implies that utilitarianism is not an egocentric theory – or even related to private interest, or suggesting a focus on one's in-group – as it strives towards the greatest good for the greatest number (the utility principle) (Crimmins 2018; Driver 2014). This may result in judging actions as good, even if such actions are incompatible with one's own needs. It is also not person-centred in the sense that the motives and the virtues of the actor play no role in the evaluation of good or bad. Rather, it is consequentialistic, as the outcomes of the act, the good effects, and not the character of the actor, are judged. No individual or action is intrinsically bad or wrong; they are bad or wrong as per their outcome (the instrumental principle) (Crimmins 2018; Driver 2014).

A last nuance which may be applicable to the evaluation is that of the hierarchy of pleasure. Bodily pleasures, a type of pleasure that animals also share, are at a lower level than pleasures exclusive to humans. So too are pleasures which may have a cumulative effect as compared to pleasures which are once-off. This may imply that quantity is not paramount and that it does not take precedence over quality. Some utilitarians, such as Henry Sidgwick (1838–1900), even argue that certain actions are intrinsically good or bad, irrespective of the outcomes, and seem able to make this compatible with utilitarianism. Perhaps more importantly, Sidgwick introduces the distinction between total and average utility (Driver 2014). This implies that all stakeholders should be considered when making use of the felicific calculus.

THE UTILITY OF HYPER-STRUCTURED STUDENT RESEARCH PROJECTS

Reporting on the utility of the HSTRP would become an extremely cumbersome task should it be considered necessary to consider the ten educational outcomes formulated in the level descriptors, the three primary stakeholder groups, and all the seven components of the felicific calculus. This would necessitate the creation of a 210-cell table. Add to this the eight characteristics that distinguish the HSSRP and the tasks would become immense and definitely beyond the volume of any article. Given that societal value has priority over individual value (Crimmins 2018; Driver 2014), and the difficulty of adding numbers to moral-issues values (Edgeworth 1881), it was decided here to evaluate the distinctive elements of the HSSRP, given its presumed societal outcome and with reference to the SAQA level descriptors (LD). The findings are presented in Table 1.

Table 1: Hyper-structured student research projects characteristics, possible societal outcomes, and meeting nationally specified standards

HSSRP Characteristics	Societal outcomes	SAQA outcomes not met. It may be unlikely the HSSRP will prepare students to display ...
Predicating the topic	(+) Should the overall objective of the project not involve self-interest, higher level research and more complex societal problems will be addressed (-) Not allowing students to bring new ideas to what is researched will limit innovation and opportunities towards change	"... the ability to conceptualise new research initiatives and create new knowledge or practice". (LD 1) "... the ability to apply specialist knowledge and theory in critically reflexive, creative and novel ways to address complex practical and theoretical problems". (LD 4) "... intellectual independence, research leadership and management of research and research development in a discipline, field or practice". (LD 9)
Structuring the literature review	(+) Less time is used for this part of the study (supervisor and students), thus there is less waste of resources, resulting in timely graduation (+) Librarians will be able to assist with more directed searches, as the domain is well defined and several students are involved (-) Students are moulded into a specific tradition or body of knowledge, not allowing exposure to alternatives or allowing alterations, resulting in uniform thinking	"... the ability to contribute to scholarly debates around theories of knowledge and processes of knowledge production in an area of study or practice". (LD 2) "... the ability to produce substantial, independent, in-depth and publishable work ... and defend research, strategic and policy initiatives and their implementation to specialist and non-specialist audiences using the full resources of an academic and professional or occupational discourse". (LD 7)
Structuring the methodology	(+) Less time is used for this part of the study (supervisor and students), as the selection of a methodology is not required (+) Services from statistical consultants are well aligned, as several students work on the same project (-) Students are introduced to specific techniques and taught to apply them. There is no room for experimentation or innovation in terms of methodology	"... the ability to develop new methods, techniques, processes, systems or technologies in original, creative and innovative ways appropriate to specialised and complex contexts". (LD 3) "... an understanding of theoretical underpinnings in the management of complex systems to achieve systemic change; and the ability to independently design, sustain and manage change within a system or systems". (LD 8)
Centralised ethical clearance	(+) High quality ethics clearances can be obtained – applied for by seasoned applicants	"... the ability to identify, address and manage emerging ethical issues, and to advance processes of ethical decision-making, including

HSSRP Characteristics	Societal outcomes	SAQA outcomes not met. It may be unlikely the HSSRP will prepare students to display ...
	(+) Approvals can be obtained even before the students register – allowing for much time saving (-) Students may be unaware of the ethical dilemmas considered during the drafting of the project (-) Students are limited in their knowledge and skills as regards applying for an ethics clearance	monitoring and evaluation of the consequences of these decisions where appropriate”. (LD 5) “... the ability to operate independently and take full responsibility for their own work and, where appropriate, lead, oversee and be held ultimately accountable for the overall governance of processes and systems”. (LD10)
Defined report writing	(+) Students are introduced to the customs of academic writing, including institutional traditions of report writing – many examples of how this should be done are available (+) Language experts can mentor students better, as they may be aware of the supervisors’ writing conventions (-) Similarity across reports, and standard ways of reporting, may elevate the levels of similarity in reports to undesirable levels	“... the ability to produce substantial, independent, in-depth and publishable work ... and defend research, strategic and policy initiatives and their implementation to specialist and non-specialist audiences using the full resources of an academic and professional or occupational discourse”. (LD 7)
Group supervision	(+) A larger number of students can be admitted to the programme and gain access to post-graduate studies (+) Interaction with peers can be of great benefit to student learning (-) Group dynamics may allow for free-riders graduating – diluting the quality of the qualification	
Higher level research outcomes	(+) Higher-level research outcomes, rather than outcomes directed merely at achieving a qualification, are achieved (+) The small, sample-limited scope outputs are integrated to a higher level research outcome (-) The students’ individuality and right to pursue important but idiosyncratic goals, or goals harboured by minority groups, may not be addressed	
Treatment of plagiarism	(-) Due to the many elements in the research that are similar, similarity indexes may have high scores – threatening the integrity of the outputs (-) Given that many students in close proximity do similar work, the temptation to plagiarise may be high (-) Time is wasted on artificially lowering similarity – trying to outsmart similarity software	
Disproportional commitment, responsibility and liability for outcomes	(+) Unqualified students may graduate – as the reputations of the project and the principal investigator are at risk (-) Students may become indifferent to the project as they make no significant decisions – resulting in limited learning (-) Students may become numb as they are not knowledgeable about the context of the research (-) Students may be irresponsible, as they were not signatory to the ethical clearance	“... the ability to make independent judgements about managing incomplete or inconsistent information or data in an iterative process of analysis and synthesis, for the development of significant original insights into new, complex and abstract ideas, information or issues”. (LD 6) “... the ability to operate independently and take full responsibility for their own work, and, where appropriate, lead, oversee and be held ultimately accountable for the overall governance of processes and systems”. (LD 10)

It is clear from Table 1 that several of the characteristics of the HSSRP have a negative societal effect, and that all level descriptors (LD1 through to LD10) are threatened by applying the

HSSRP.

On the positive side, consequences of group supervision could be group work and group learning. Learning from peers is very useful (Burke and Hutchins 2007; Samuel and Vithal 2011), and this should result in “communities of practice” where reciprocal learning foster creativity and the development of new knowledge (Wenger 1998; Fenge 2012; Buissink-Smith, Hart and Van der Meer 2013).

The higher-level outcomes are also a positive outcome of the HSSRP. It may produce the higher number of graduates identified in the “The PhD study” (Jansen 2010), and it further addresses the four discourses listed as imperative to the production of higher level qualifications in South Africa, namely “global and national competition (the imperative for growth), efficiency, transformation and equality” (Cloete et al. 2015, 20). It should, however, be asked if the outcomes go beyond building a knowledge economy and serving economic development, whose interests these outcomes serve, and whether said outcomes serve society (Wilson-Strydom 2016)? The HSSRP may do all of the above – or at least more than smaller and less integrated research projects.

On the negative side, and when the SAQA level descriptors are considered, the outcomes associated with the HSSRP method are a serious concern. The HSSRP represents a threat to all 10 of the level descriptors (Scope of knowledge; Knowledge literacy; Method and procedure; Problem solving; Ethics and professional practice; Accessing, processing and managing information; Producing and communicating of information; Context and systems; Management of learning; and Accountability). Although these descriptors are seemingly targeted at individual performance, the consequences of the individual not achieving the outcomes have dire consequences for society, producing graduates incapable of delivering on the aptitude associated with achieving the qualification.

CONCLUSIONS AND RECOMMENDATIONS

The utility of the HSSRP may be perceived differently by different agents. What has not been discussed in detail above is the matter of benefits at institutional level, should the aim of the university be to produce eligible graduates. The HSSRP seems to increase throughput rates, and the supervisors of these projects are appreciated and incentivised at university level (Peterson 2017). Some students, particularly those not especially interested in research, such as business school students (Albertyn et al. 2017; Alauddin and Ashman 2014), may be drawn to programmes which provide structure and quick throughput. Supervisors may also find the HSSRP attractive, as it not only allows for supervising several students simultaneously, focusing on one topic only, and saving considerable time, but it also produces higher-level

research outputs that are more publishable and attract academic recognition.

The teleological principle, on which the utilitarian ethic is based, stresses the consequences which result from an action or process. It further observes the principle that the “end justifies the means” (Beekun, Stedham, Yamamura and Barghouti 2003). In the case of the HSSRP the question as to whose “end” should be justified is partially answered by utilitarian theorists whose focus on the common good, including all role-players and higher level outcomes, suggests societal goals (Crimmins 2018; Driver 2014). It would, however, be difficult to find a balance between the individual and organisational (university-based) beneficiaries of the HSSRP and the social good associated with this way of carrying out supervision. In fact, all 10 of the level descriptors specified earlier are threatened by engaging in an HSSRP. Solely based on this specific analysis, universities should therefore exercise caution with regard to this type of project supervision. This method tends to serve the individual, namely the supervisor, more than society.

Before concluding that the HSSRP is obsolete as a method to deal with massification, utilitarian ethics require us to weigh the outcomes of the HSSRP against alternatives – that is, alternative ways of doing research with large numbers of students. The question as to whether alternative types of supervision provide better outcomes should be posed. Will those exposed to the apprentice model, for example, not also become involved in a specific way of doing things, with little autonomy for decision-making, particularly if they are also exposed to a supervisor who is inherently authoritative or autocratic? In such cases, the supervisor agenda may not be as open as in the case of HSSRPs, but student development may be stifled by the dominant frameworks of the supervisor. More examples of learning restrictions could easily be deduced from Figure 1.

Unpacking the HSSRP, focusing on what it comprises, considering the standards set in the South African National Qualifications Framework (South African Qualifications Authority 2012), and applying the principles of utilitarianism theory, have all allowed for a much broader understanding of the HSSRP. It is not simply a method as part of which the student has little individual discretion or creativity, or where the principal investigator can be perceived to be narcissistic and self-serving – it is also a method which allows for higher throughput and higher level research outcomes. From a societal perspective, there may be concerns about the quality of the research students deliver through the HSSRP process, and this could be a major source of concern when applying this method. Does the HSSRP succeed at the expense of the students and the community which sponsors them?

How could the problems related to the HSSRP be mediated, given that this method should possibly be retained as it produces higher-level research outcomes and also results in high

throughput rates?

- The first problem that needs to be addressed is that of the students' education being "channeled" into a very specific area of the literature and a specified methodology. This denies them the opportunity to explore alternative literature and learn different methodologies. It would therefore be recommended that the HSSRP be structured in such a manner so as to report critically on the preferred literature and methodology, and also to defend this stance, describing why it was selected above another or even why it may constitute a limitation to the project. This will address many of the outcomes specified in the South African National Qualifications Framework (South African Qualifications Authority 2012). Following this route, young researchers will be exposed to a broader knowledge domain and alternative research methodologies.
- Secondly, a critical analysis should also apply to the management of HSSRP. Students should be granted the opportunity to criticise the way the project unfolds and to become part of the project and the renewal thereof. Students need to be supported in how to express the creative thinking required in research (Brodin 2015). The involvement of others – not only the student and the supervisor – is also important in learning how to conduct research (Carlile 2004; Biesta 2012; Sinclair et al. 2014). Development is based on social interaction (Hopwood 2010), whereas gaining knowledge is both a process and a product of interaction (Dysthe, Samara and Westrheim 2006). It is therefore recommended that those involved in HSSRPs create "communities of practice" (Wenger 1998; Fenge 2012; Buissink-Smith et al. 2013), allowing for a wider set of discourses (Abrandt Dahlgren, Hult, Dahlgren, Segerstadt and Johansson 2006), where the more informed encourage the less informed to advance the agenda (Ball 2009). Presently, the HSSRP supervisor-student relationship is depicted as one of high power distance, and the aforementioned type of interchange may contribute substantially to change this paradigm.
- A last recommendation involves the need to be ethically astute, as specified in level descriptor 5 (LD5) of the South African National Qualifications Framework (South African Qualifications Authority 2012). Intensive training on research ethics is recommended. This could easily be achieved, as many online courses exist (see nhrec.net/tree-training/ for example) which allow for formal certification and meet most statutory requirements.

Given these recommendations, academics engaged in HSSRP could modify their programmes

so as to serve a greater number of “requirements”. This article makes a valuable contribution to the debate on alternative measures to streamline supervision in an era of massification. The contribution is embedded in the multi-dimensional perspective used in the analyses of the HSSRP and in identifying the flaws embedded in outcomes which result from the method. Applying traditional utilitarianism has further moved the debate beyond individual and institutional interest and placed the focus on the societal worth of applying the method. Apart from stimulating debate, practical and achievable recommendations have been made and these will enhance the value added through the adoption of HSSRPs. Higher education in general should take note of these findings as they are core to their mandate of generating qualified researchers. Discounting these findings may hold a serious risk for the continued viability and accreditation of qualifications linked to these types of research.

REFERENCES

- Abrandt Dahlgren, M. A., H. Hult, L. O. Dahlgren, H. H. Segerstad and K. Johansson. 2006. From senior student to novice worker: Learning trajectories in political science, psychology and mechanical engineering. *Studies in Higher Education* 31(5): 569–586.
- Alauddin, M. and A. Ashman. 2014. The changing academic environment and diversity in students’ study philosophy, beliefs and attitudes in higher education. *Higher Education Research and Development* 33(5): 857–870.
- Albertyn, R. M., P. Machika and C. Troskie-de Bruin. 2016. Towards responsible massification: Some pointers for supporting lecturers. *African Education Review* 13(3&4): 49–64.
- Albertyn, R., S. van Coller-Peter and J. Morrison. 2017. A multi-level researcher development framework to address contrasting views of student research challenges. *South African Journal of Higher Education* 32(1): 13–30.
- Ball, A. 2009. Toward a theory of generative change in culturally and linguistically complex classrooms. *American Educational Research Journal* 46(1): 45–72.
- Basturkmen, H., M. East and J. Bitchener. 2014. Supervisors’ on-script feedback comments on drafts of dissertations: Socialising students into the academic discourse community. *Teaching in Higher Education* 19(4): 432–445.
- Beekun, R. I., Y. Stedham, J. H. Yamamura and J. A. Barghouti. 2003. Comparing business ethics in Russia and the US. *International Journal of Human Resource Management* 14(8): 1333–1349.
- Bentham, J. 1789. *Economics and liberty an introduction to the principles of morals and legislation*. Oxford: Clarendon Press. <http://fs2.american.edu/dfagel/www/Philosophers/Bentham/principlesofMoralsAndLegislation.pdf>
- Beqiri, M. S., N. M. Chase and A. Bishka. 2010. Online course delivery: An empirical investigation of factors affecting student satisfaction. *Journal of Education for Business* 85(2): 95–100.
- Biesta, G. 2012. Have lifelong learning and emancipation still something to say to each other? *Studies in the Education of Adults* 44(1): 5–20.
- Blum, L. D. 2010. The “all-but-the-dissertation” student and the psychology of the doctoral dissertation. *Journal of College Student Psychotherapy* 24(2): 74–85.
- Boehe, D. M. 2016. Supervisory styles: A contingency framework. *Studies in Higher Education* 41(3): 399–414.
- Bologna Working Group. 2005. *A framework for qualifications of the European higher education area*.

Bredgade: Ministry of Science, Technology and Innovation.

- Boyd, B. and C. Smith. 2016. The contemporary academic: Orientation towards research work and researcher identity of higher education lecturers in the health professions. *Studies in Higher Education* 41(4): 678–695.
- Brodin, E. M. 2015. Conditions for criticality in doctoral education: A creative concern. In *The Palgrave handbook of critical thinking in higher education*, ed. M. Davies and R. Barnett, 265–282. New York: Palgrave MacMillan.
- Buissink-Smith, N., S. Hart and J. van der Meer. 2013. “There are other people out there?” Successful postgraduate peer groups and research communities at a New Zealand University. *Higher Education Research and Development* 32(5): 695–705.
- Burke, L. A. and H. M. Hutchins. 2007. Training transfer: An integrative literature review. *Human Resource Development Review* 6(3): 263–296.
- Carlile, P. R. 2004. Transferring, translating and transforming: An integrative framework of managing knowledge across boundaries. *Organization Science* 15(5): 555–568.
- Cloete, N., J. M. Mouton and C. Sheppard. 2015. *The doctorate in South Africa: Discourse, data and policies*. Cape Town: African Minds.
- Crimmins, J. E. 2018. Jeremy Bentham. In *The Stanford Encyclopedia of Philosophy*, ed. N. Edward. <https://plato.stanford.edu/archives/sum2018/entries/bentham/>
- Croussard, B. 2013. Conceptualising doctoral researcher training through Bernstein’s theoretical frameworks. *International Journal for Researcher Development* 4(2): 72–85.
- Driver, J. 2014. The history of utilitarianism. In *The Stanford Encyclopedia of Philosophy*, ed. N. Edward. <https://plato.stanford.edu/archives/win2014/entries/utilitarianism-history/>
- Dysthe, O., A. Samara and K. Westheim. 2006. Multi-voiced supervision of masters students: A case study of alternative supervision practices in higher education. *Studies in Higher Education* 31(3): 299–318.
- Edgeworth, F. Y. 1881. *Mathematical psychics: An essay on the application of mathematics to the moral sciences*. London: Kegan Paul. <https://doi.org/10.2307/2223848>
- Edwards, A. 2011. Building common knowledge at the boundaries between professional practices: Relational agency and relational expertise in systems of distributed expertise. *International Journal of Educational Research* 50(1): 33–39.
- Eneau, J. 2008. From autonomy to reciprocity, or vice versa? French personalism’s contribution to a new perspective on self-directed learning. *Adult Education Quarterly* 58(3): 229–248.
- Engebretson, K., K. Smith, K. McLaughlin, C. Siebold, G. Terret and E. Ryan. 2008. The changing reality of research education in Australia and implications for supervision: A review of the literature. *Teaching in Higher Education* 13(1): 1–15.
- Evans, L. 2011. The scholarship of researcher development: Mapping the terrain and pushing back boundaries. *International Journal for Researcher Development* 2(2): 75–98.
- Evans, L. 2014. What is effective research leadership? A research-informed perspective. *Higher Education Research and Development* 33(1): 46–58.
- Fenge, L-A. 2012. Enhancing the doctoral journey: The role of group supervision in supporting collaborative learning and creativity. *Studies in Higher Education* 37(4): 401–414.
- Hopwood, N. 2010. Doctoral experience and learning from a sociocultural perspective. *Studies in Higher Education* 35(7): 829–843.
- Hofstede, G. 2001. *Culture’s consequences: Comparing values, behaviors, institutions, and organizations across nations*. 2nd Edition. Thousand Oaks, CA: Sage.
- Hornsby D. J. and R. Osman. 2014. Massification in higher education: Large classes and student learning. *Higher Education* 67(6): 711–719.
- Jansen, J. 2010. *The PhD study*. Pretoria: Academy of Science of South Africa (ASSAf).

- Lee, A. and B. Green. 2009. Supervision as metaphor. *Studies in Higher Education* 34(6): 615–630.
- Manathunga, C. 2005. The development of research supervision: “Turning the light on a private space”. *International Journal for Academic Development* 10(1): 17–30.
- Mill, J. S. 1879. Utilitarianism. *Fraser’s Magazine* 4(14): 211–229. <https://doi.org/10.1093/mind/os-4.14.211>
- Pata, K. 2009. Modeling spaces for self-directed learning at university courses. *Educational Technology & Society* 12(3): 23–43.
- Peterson, C. 2017. Teaching excellence award goes to Prof Grobler. *UNISA, News and Events*. <http://www.unisa.ac.za/sites/sbl/default/News-&-events/Articles/Teaching-excellence-award-goes-to-Prof-Grobler>
- Reid, A. and P. Petocz. 2004. The professional entity: Researching the relationship between students’ conceptions of learning and their future profession. In *Improving student learning: Theory, research and scholarship*, ed. C. Rust, 145–157. Oxford: Oxford Rewley Press.
- Samuel, M. and R. Vithal. 2011. Emergent frameworks of research teaching and learning in a cohort-based doctoral programme. *Perspectives in Education* 29(3): 76–86.
- Sinclair, J., R. Barnacle and D. Cuthbert. 2014. How the doctorate contributes to the formation of active researchers: What the research tells us. *Studies in Higher Education* 39(10): 1972–1986.
- South African Qualifications Authority. 2012. *The South African Qualifications Authority (SAQA). Level Descriptors for the South African National Qualification Framework*. http://www.saqa.org.za/docs/misc/2012/level_descriptors.pdf
- Tymon, A. and S. Batistic. 2016. Improved academic performance and enhanced employability? The potential double benefit of proactivity for business graduates. *Teaching in Higher Education* 21(8): 915–932.
- Waghid, Y. 2015. Are doctoral studies in South African higher education being put at risk? *South African Journal of Higher Education* 29(5): 1–7.
- Walkington, C. A. 2013. Using adaptive learning technologies to personalize instruction to student interest: The impact of relevant contexts on performance and learning outcomes. *Journal of Educational Psychology* 105(4): 932–945.
- Wenger, E. 1998. *Communities of practice: Learning, meaning and identity*. Cambridge: Cambridge University Press.
- Wilson-Strydom, M. 2016. Complexities and contradictions of doctoral education in South Africa. *South African Journal of Science* 112(3): 1–2. <https://doi.org/10.17159/sajs.2016/a0147>