

Revisiting expansive learning for knowledge production and capability development at postgraduate level in Higher Education Studies

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Higher education in South Africa is challenged by academic and social demands. Universities, therefore, have to produce graduates who will be able to function optimally within their field of study, as well as act as agents of change in their social environment. The main purpose of this article is to theorise about applying Engeström's expansive learning theory to teaching at Master's level in order to address the academic demands at this level as well as foster essential capabilities. In this theoretical article, a possible framework is proposed for teaching students in a coursework programme in Higher Education Studies. The framework is based on re-conceptualised principles of expansive learning as a means of addressing the demands for producing graduates, who will possess both academic and social capabilities. The framework is an attempt to contribute to the conceptualisation of teaching as a process and a product by providing guidelines for integrating theory and practice. In this regard, it is focused on addressing both the quest for academic rigour as well as for embedding capabilities, valuable for human development.

Keywords: Engeström, expansive learning, postgraduate, capabilities, academic rigour, human development, knowledge production, co-configuration

Introduction

For centuries people have benefitted significantly from the education they have received in the higher education sector, but there has always been a need for the wider society to also benefit from this education in some way. Currently, many fields of study in South Africa are under increasing pressure to contribute to the wider society and human development by, *inter alia*, producing knowledge that will extend students' ability to function in society and to be agents of development in their country. This article explores Engeström's (1998-2008) expansive learning theory as a possible framework for teaching coursework programmes at Master's level, which will deliver the required type of graduates.

Teaching a coursework programme at Master's level in Higher Education Studies, I became challenged by the notion of aligning the generation of knowledge at Master's level with the capabilities that would enable the students to become agents of change. In guiding the students in gaining the necessary capabilities and the ability to become engaged in research projects have become a necessity as the students are all teaching at higher education institutions.

Universities can obviously not meet all of society's needs in terms of human development, but universities, by means of their academic programmes, can make major contributions by delivering graduates who can. By contributing to society, Higher Education Institutions (HEIs) need to stimulate, among others, deep learning as well as develop capabilities that will enable graduates to bring about changes in their "practical lived" environments (Nussbaum, 2000: 78-70). In a developing country such as South Africa, the higher education sector also has to generate knowledge that is not isolated from the problems of the country, which means that graduates need to be equipped with capabilities to address those problems. To become equipped with such capabilities entails an expansion of the range of things that a person can be and do, such as being knowledgeable about, and being able to participate in society for public good (Fakuda-Parr, 2003: 303). In this instance, Sen's work (2002: 86-94), which stipulates that people are "the real wealth of a nation", emphasises the role universities can play in producing graduates who can contribute to changing their own lives as well as that of others. By building particular capabilities

into the education of their students, lecturers in higher education can contribute to developing agents of change, both individually and collectively (Sen, 1989; Fakuda-Parr, 2003) by facilitating learning and teaching modes that will generate new knowledge that is relevant to the contexts in which it will be used. Kraak's (2000) engagement in new forms of knowledge production and the effect that it may have on South African higher education, supported my personal concern. Kraak (2002: 55, 74) stressed the development of models of knowledge production that would facilitate patterns of mental interconnections in optimising learning. This challenged me to contemplate innovative ways to stimulate knowledge production in the higher education classroom, as well as equip higher education lecturers with transferrable competencies that will enable them, in turn, to transmit knowledge to, and develop the capabilities of their students. In this regard, I share Wehbi's (2009: 504) concern about the anxiety of higher education teachers to live up to current scholarship standards. Wehbi (2009: 505) also expressed concern about the engagement of students in ways that will enable them to "bridge the gap between theory and practice". In addition, there are concerns about an exclusive disciplinary approach which could lead to students believing that they need merely to master a collection of facts, principles and skills in a particular subject area – instead of learning how these might be used to inform larger, real-life purposes by contributing to "public good" (Gallifa & Garriga, 2010; Winberg, 2006). This social responsiveness of South African HEI's is emphasised by Waghid (2008: 19) who refers to the "public role of the university" – a role that is also stressed by Albertyn & Daniels (2009: 409) in terms of the "production of knowledge and the development of skills needed to live in a diverse society".

This theoretical article focuses on a possible teaching and learning mode that will lead to knowledge production in a coursework programme at Master's level, which will also instil students with capabilities to bring about social change. Such experiences could become rather valuable to these students when they embark on their theses or dissertations. In facilitating this type of knowledge production, March (1996) refers to the necessity of learning processes, which requires the transmission of existing knowledge in order to also cope with other new objects and activities, leading to the gradual experimentation with and internalisation of the new knowledge beyond disciplinary boundaries. This means that numerous teachers at universities have to take up the challenge of contributing to public good without compromising academic standards. The above challenge gave rise to my question: How can teaching in coursework Master's programmes in Higher Education Studies facilitate deep learning and produce knowledge that is socially relevant and will foster capabilities for the enhancement of graduate agency? Expansive learning, which involves a wide, heterogeneous set of practices and allows for new knowledge creation to be actualised, has been revisited in this article, but before it could be considered for application at a Master's level, it was necessary to view the requirements of teaching and learning at that level.

Learning thresholds of Master's degrees

South Africa's regulatory frameworks seek to advance learning efficiency in terms of which Young (2003) emphasises the extrinsic role that universities play in knowledge production as well their role in the broader social order for the enhancement of intellectual development, personal autonomy, meaningful citizenship and the capabilities required to function optimally in these areas.

In conceptualising the level of teaching and learning at Master's level and how these level requirements can possibly be reconciled with Engeström's learning theory, I used the Higher Education Qualification Framework (RSA, 2007) and South African Qualification Authority's (SAQA, 2010) level descriptors for level nine.

These documents used terms such as "researchers who could contribute to the development of knowledge ... including knowledge about professional practice" (RSA, 2007: 41) in relation to imperatives such as "advanced scholarship" (SAQA, 2010: 8) and "a high level of theoretical engagement and intellectual independence and by completing and reporting on a research project" (RSA, 2007: 41). These terms create expectations about any teaching at Master's level, as it requires teaching that would stimulate the development and advancement of disciplinary knowledge, theoretical engagement,

intellectual independence, critiquing existing research and practices, as well as the ability to deal with complex issues, and tackling and solving problems. In doing so, Master’s students also have to be led to make sound judgements by using data and information, managing resources, taking responsibility for their own work, interacting effectively within a professional group and communicating their conclusions (RSA, 2007: 41; SAQA, 2010: 8-9). The above requirements seem as if the knowledge that has to be generated at Master’s level consists of two domains: the production of rigorous academic knowledge and the inculcation of particular capabilities that can be applied to the broader social and developmental context. These two domains are portrayed in Figure 1.

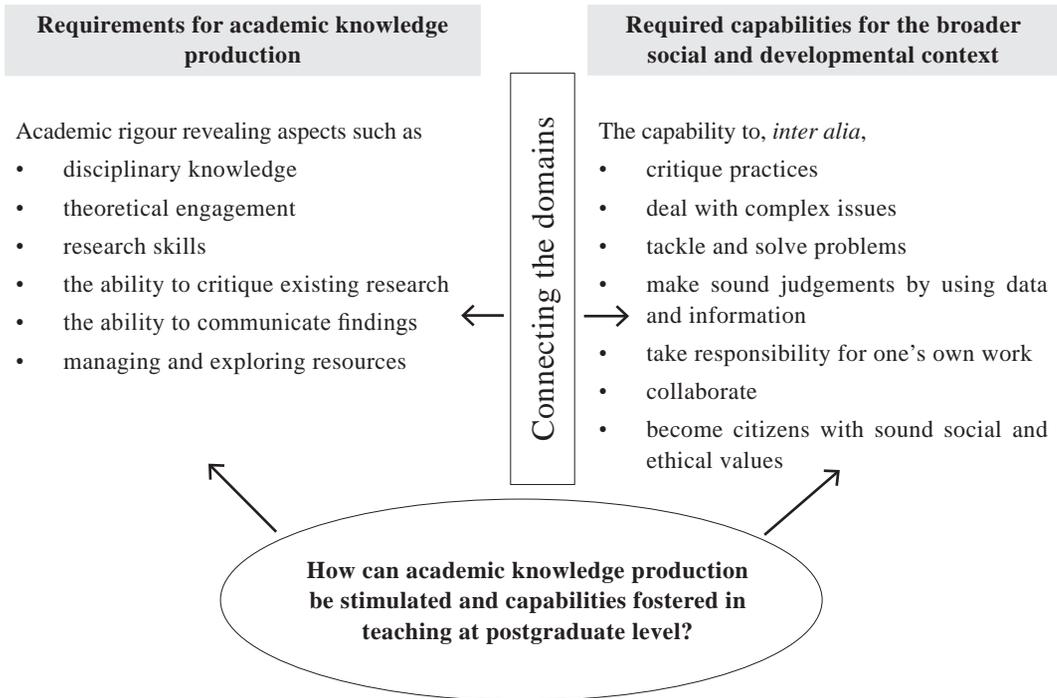


Figure 1: Domains to be included in postgraduate teaching as stipulated by the SA learning thresholds

The above figure illustrates a number of regulatory learning thresholds for postgraduate programmes, revealing aspects that should be inculcated in terms of both knowledge production and capability development. The challenge for teachers at postgraduate level is to teach in ways that will stimulate the above thresholds.

Students in Higher Education Studies are in lecturing positions at universities and are expected to become scholars. The reference to the development of “scholarship” in the level descriptors for Master’s programmes (SAQA, 2010: 8) means that these students cannot escape their research responsibilities. The importance of postgraduate students becoming quality researchers has also been stressed by Samuel & Vithal (2011: 77). In terms of these scholarship imperatives and its relationship to graduates’ social responsiveness, I recall Boyer’s (1997: 23) quotation of Oscar Handlin’s words when he was in the process of conceptualising the role of scholarship by saying “one can no longer afford the luxury of pursuits confined to an ivory tower ... scholarship has to prove its own worth not on its own terms but by service to the nation and the world”.

Teachers at postgraduate level, therefore, need to be aware of the various dimensions which form part of the postgraduate learning thresholds as well as the capabilities that would enhance graduate agency. However, these teachers need to be given the ‘tools’ to facilitate these learning processes and it is in this context that Engeström’s expansive learning theory was viewed as a possible means to provide the required ‘tools’.

Engeström’s expansive learning theory

In addressing university teaching to facilitate rigorous learning and knowledge production that is socially relevant and fosters capabilities for graduate agency, teachers in Higher Education Studies need to be able to connect theory and practice. Although expansive theory started as an organisation and workplace learning model in the world of business, it has, over the past few years, emerged as a multidisciplinary approach to learning (Engeström, 2004; Chaiklin, Hedegaard & Jensen, 1999).

Engeström (2000: 960) indicated that most learning concepts draw on basic psychological notions of mental processes and consequently introduce the concept of co-configuration when learning takes place. This notion of learning originated with Russian psychologist Vygotsky’s (1978: 86) zone of “proximal development”, underpinned by the philosophy of “scaffolded learning”, whereby the “distance of the actual development as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers”. Students are confronted with real-life problems and provided with the foundations for development and then led by the teacher to reach new levels of learning in collaboration with their co-students. According to Engeström (2004: 14), expansive learning has *transferable exploitation* as its inception, where existing knowledge or sources form the foundation of the new knowledge or activity. As a person gradually acquires and internalises the existing knowledge and skills that underlie the new knowledge or activity to be mastered, *adjustable exploitation* takes place. The next phase is called *incremental exploration* where new knowledge or activity is constructed by experimenting with it within a given activity. Radical exploration or *expansive learning* then begins as the experimentation is no longer restricted to the pre-existing knowledge, but when new knowledge and new practices are emerging and the internalisation of the new knowledge or activity is starting to take place. Fleck (1994: 638) refers to this process as a process of “learning by trying”: improvements and modifications have to be made to the constituent components before the new knowledge or action can work as an integrated entity – also referred to as a process of co-configuration.

Co-configuration demands substantial input if it is to be successful. Such inputs require actions that will stimulate innovation and efforts to solve the problem or get the system to work. At this stage, Engeström’s transitional zone between incremental exploration and radical, expansive exploration comes into play. Expansive learning thus begins not only when experimentation aimed at finding solutions within the framework of existing knowledge, but also when there is a search for options from what is not yet there. According to Engeström (2004), new knowledge or new practices are produced when students have been challenged by the posing of a problem and they then explore or change the problem that has to be addressed. This cyclic character of expansive learning, brought about through a sequence of learning actions ascending from the initial abstract first phase of learning to the final concrete whole, provides a central framework for the analysis and design of learning in order to reach the stage of co-configuration. Engeström (2004) admits that expansive learning actions are intertwined with other horizontal or sideways movements across cognitive knowledge domains to reach co-configuration, and that these horizontal movements need to be integrated to reach the stage at which expansive learning takes place. When expansive learning happens, students have to apply higher order thinking skills for new scholarly knowledge to be produced. Postgraduate levels seem to provide an ideal platform for the facilitation of this type of expansive learning, because students have to construct new knowledge and need to be guided to do so – meaning that students have to be exposed to processes whereby they learn to create new knowledge. Engeström (2001: 139) refers to this construction of new knowledge as “heterogeneous patchworks”, where the “loosely interconnected systems” come together by means of certain actions – a

co-configuration of parts. The process of co-configuration is also referred to as “knot working”, implying the tying, untying and retying of seemingly separate threads of knowledge and practice to generate new theory or practice. The following figure illustrates the stage of expansive learning when insights come together and co-configuration (knot-working) takes place, resulting in new knowledge.

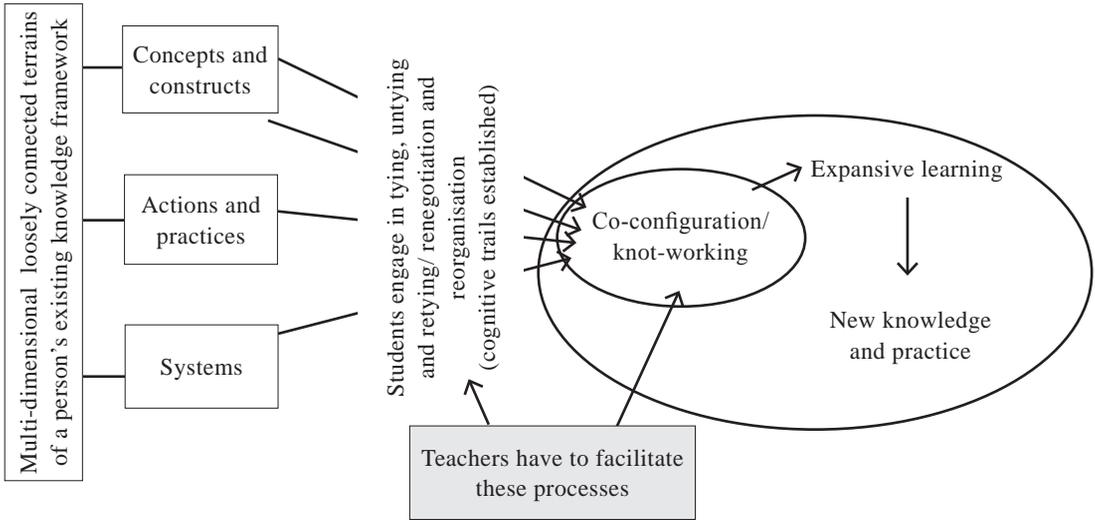


Figure 2: Co-configuration (knot-working) process

As the various loosely connected parts (terrains) of the individual’s existing knowledge framework become renegotiated and reorganised, the parts (terrains) become knotted together or co-configured. These knotworks or co-configurations lead to the expansion of the learning that takes place, resulting in the production of new knowledge and practice. It is in this context that the teacher at postgraduate level has a major role to play in facilitating the processes for establishing new cognitive trails.

A framework for postgraduate teaching in Higher Education Studies by means of expansive learning

According to Boyer (1997: 24), teaching is the “dynamic endeavour that builds bridges between teachers’ understanding and students’ learning”. Teachers have to stimulate active learning and “encourage students to be critical, creative thinkers and stimulate the capacity to go on learning after their college days and keep the flame of scholarship alive”.

Different disciplines require a variety of types of knowledge creation and learning. Along the lines of the above explanation of learning, Spinosa, Flores & Dreyfus (1997) also emphasised co-configuration or “knot-working”, which implies the tying together of the various dimensions so that a “bigger picture” is created. It is particularly in this process of generating new knowledge and practice that the teacher in Higher Education Studies, which is multidisciplinary in nature, has a major facilitative role to play. Engeström (2000) stated additional principles to guide in teaching for expansive learning: *first*, by ensuring relevance to the context or actual problems; *secondly*, by fostering continuous relationships between the terrains of existing knowledge; *thirdly*, by facilitating ongoing involvement and collaboration and, *fourthly*, by stimulating mutual learning through interaction.

Teachers of postgraduate students at Master’s level seemingly have to facilitate the “co-configuration or knot-working” so that new knowledge can be produced and capabilities can be fostered through expanded learning processes. Based on the exploitation and exploration principles of expansive learning

(as explained earlier), Engeström (2001) supported his model with an expansive cycle of learning actions, which brought a more tangible dimension to the dynamics of learning (Figure 3).

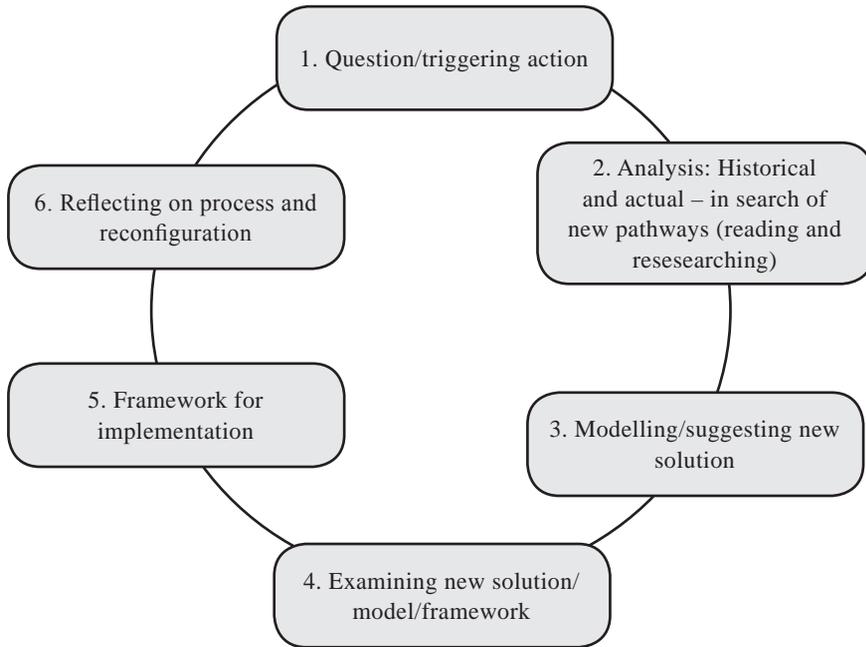


Figure 3: Engeström's expansive cycle of learning actions (2001)

By integrating Engeström's model for co-configuration by means of expansive learning and the production of new knowledge (Figure 2) and expansive cycle of learning actions (Figure 3) with postgraduate learning thresholds (Figure 1), a framework for teaching Higher Education Studies at Master's level has been developed. This framework has as its aim the facilitation of expansive learning, the production of new knowledge or practice as well as the fostering of capabilities for the enhancement of graduate agency. Figure 4 represents the framework.

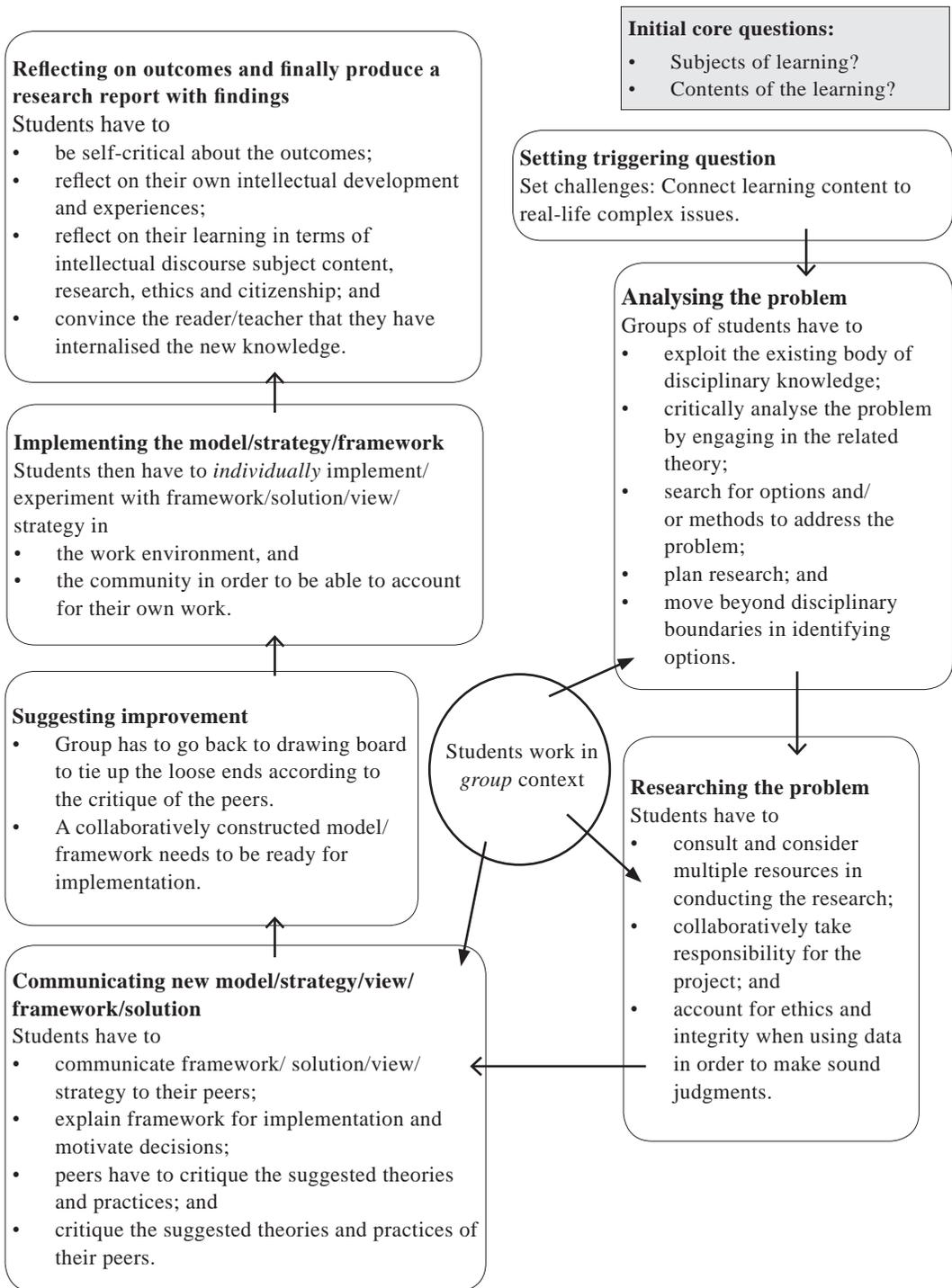


Figure 4: Framework for teaching coursework Master's in Higher Education Studies

Discussion of above framework for postgraduate teaching

As in any teaching situation, it is crucial that the teacher contemplates the composition of the student population and the disciplinary content that needs to be dealt with. Aspects such as diversity, experience, preceding knowledge and the complexity of the content have to be accounted for.

In the initial phase of teaching, the teacher has to challenge the groups of students in the class by connecting the learning content to real-life complex issues confronting higher education. It is important that the *triggering question* should pose a problem that is not isolated from the complexities and realities of the country and that the final outcomes should be focused on arriving at solutions that would contribute to the improvement of the dilemma as well as develop the students' ability to conduct research in order to ultimately become agents of change. The students are then expected to exploit their existing body of knowledge as they engage in a critical *analysis of the problem* in seeking possible options and/or methods to address the problem. In dealing with the problem, the students collaboratively have to *plan a research project*. In this process, they should be prompted to think "outside the box", even to the point of challenging disciplinary boundaries. During this phase of the process, it could be valuable that the thinking and argumentation about the problem takes place in the group context, as mutual learning is an important learning principle.

As the students embark on the research, they have to consult a variety of sources, as well as consider various resources and multiple methods to obtain the necessary data and information in order to deal with the problem. These collaborative actions necessitate that members of the group collaboratively take responsibility for the project. Even if they divide the tasks among themselves, they have to collate their newly discovered information and, at some stage, produce a product. During this search for knowledge, a number of capabilities such as collaboration, problem-solving, analysis and decision-making are fostered as they explore the options, make judgments and jointly account for the ethics in, and integrity of the process. The *collaboratively constituted framework* (or whatever had to be done) then has to be *communicated* to the class by means of an oral presentation, during which the peers join in discussion and argumentation. As each group explains their framework for implementation and motivate the decisions they have made, they become reflective on what they have done and simultaneously gain from the inputs of the larger group. After this phase of the learning process, the framework can be improved by the new insights that have been added – learning from one another.

In the process of exploring new knowledge in both a rigorous and a developmental way, the various members of the groups have to go back to the drawing board after they have learnt from the application of the theoretical framework. The new insights have to be used in order to untie and retie the ends. As this *knot-working* between theory and practice emerges, the students can re-configure the framework/solution/view they have developed. As the learning expands, new knowledge and practice emerge.

During the next phase, the learning is expanded when the students have to individually implement/experiment with strategy/framework/solution in their different work environments or communities of practice. Issues that lend themselves to community engagement can benefit from such actions. Personal autonomy and ownership are encouraged by this phase of individual *implementation or experimentation*, which necessitates that they become self-critical about the outcomes of their framework. Students are continuously involved in learning, application and reflection. They are also required to *reflect* on their personal intellectual development and experiences, their engagement in the ongoing discourses, and their growth through their exposure to new theoretical and disciplinary knowledge, as well as deliver a research report with findings. The students' critical thinking and engagement with real-life problems in their field of study are instrumental in the development of their citizenship. The framework presented in Figure 4 could provide a platform for the production of new academic knowledge and the fostering of crucial capabilities. Postgraduate students are challenged to develop their analytical abilities in a collective and individual context. As they develop these abilities, they become confident and are able to transfer those abilities to other contexts in society and in the workplace.

Because students are initially functioning in a team, they feel safe as they are exposed to collective thinking and reasoning – a process of mutual learning. When they are exposed to the bigger group of

peers (the class) in presenting their frameworks, new challenges are posed, which necessitate rigorous debates and compel each group to take responsibility for their analyses and decisions in addressing the complex problems. The initial safe environment is then expanded to individual responsibility, learning and reflection, as the students are exposed to applying their collectively developed new framework/strategy/view/solution in their own “real-life” situations. As the learning cycle evolves, students become increasingly capable of critical and creative thinking – thinking outside the box, challenging their previous levels of knowledge by moving to new levels of learning.

Conclusion

The above framework for teaching not only stimulates knowledge production, but also fosters socially relevant capabilities. Engeström’s expansive learning theory seems to be sufficiently multidimensional to allow for sophisticated knowledge production as well as for capability development. The facilitation of expansive learning will increase the students’ ability to engage in intellectual discourses and research, as well as equip them with capabilities to participate in society, make contributions to existing problems in the country, and develop reflective skills.

By drawing on the words of Giroux & Searls Giroux (2004: 251) where universities are regarded as the place where “students can learn to think for themselves, question authority, recover the ideals of engaged citizenship, reaffirm the importance of public good and expand their capacity to make a difference in society”, it becomes crucial to explore ways whereby these goals can be achieved.

In this article, Sen’s ideas about the development of capabilities for “public good” have been integrated with Engeström’s model of expansive learning. The two seemingly irreconcilable paradigms, a social theory and an organisational theory, have been merged to produce a new critical approach to teaching a coursework Master’s programme. The framework that emerged from this conceptualisation broadens the discourse on higher education teaching and the quest for academic rigour as well as the embedding of capabilities that have a wider range of applicability than simply the academy. It is particularly in the latter that the framework’s value for human development is locked up. Although this article primarily focused on postgraduate teaching by using the national learning thresholds for level 9, the teaching framework (Figure 4) can also be adapted to suit the teaching demands at undergraduate level and even for teaching across disciplinary boundaries. This article mainly conceptualised a framework for teaching a coursework Master’s programme, which has since been put into practice. The outcomes of the implementation will be reported in another article. With the plethora of challenges confronting teachers in higher education, this framework can also contribute to alleviate the anxiety in respect of stimulating scholarly knowledge production, as well as positively influencing the development of graduate agency.

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