

# Understanding co-operative learning: a case study in tracing relationships to social constructivism and South African socio-educational thought

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## ABSTRACT

The article outlines a case study whereby, in a BEd module on innovative teaching and learning strategies, students were challenged with the question: "How does co-operative learning relate to social constructivist learning theory, ubuntu, outcomes based education (OBE) and (perhaps) the African Renaissance?" It describes how the students, through a co-operative learning process, researched and debated the question in four groups. The author's concerns that the students' view of educational practice might become inhibited by exposure to limited theories related to co-operative learning, were proven to be largely unfounded. The article concludes by arguing that co-operative learning as an innovative educational practice should be informed by multiple, relevant and contextualised theories, philosophies and approaches, enabling practitioners to make sense of why and how particular techniques should be employed to mediate learning, especially in a South African schooling environment.

## INTRODUCTION

What does social constructivism have in common with ubuntu, outcomes based education and the African Renaissance? What relevance do these concepts have for co-operative learning and how are they related? These thoughts recently arose as I prepared materials for a module on co-operative learning in a BEd semester course on innovative teaching and learning strategies. I wondered whether BEd students would be inhibited in their learning by (scantily) relating social constructivist learning theory to the educational practice of co-operative learning in the school environment. Would they be intellectually provoked by merely studying the "techniques and technicalities" of co-operative learning? Would they

be able to acquire a multi-perspectivist approach to co-operative learning by drawing from a number of theories (or philosophies) to enhance the mediation of learning in and beyond their classrooms? Would they be restricted in their thinking by applying or promoting these theories?

I imagined these BEd students to be a group who relied more heavily on practice to understand the theory related to co-operative learning. Having been exposed to background study material, all students should nevertheless have been aware of the importance of the five "critical" components of co-operative learning (Johnson & Johnson 1994), namely

- positive interdependence;
- promotive interaction;
- individual accountability;
- social skills development; and
- group processing.

A major concern at this level of study is that the students are mostly interested in HOW to apply the techniques of co-operative learning effectively. Consequently they neglect to question WHY it actually works and WHERE its theoretical and philosophical underpinnings and relationships lie.

## THE RESEARCH QUESTION

I posed a question to the BEd class, challenging them to find, as co-operative groups themselves, possible answers to a particular question which was of an "open" nature: "How does co-operative learning relate to social constructivist learning theory, ubuntu, OBE and (perhaps) the African Renaissance?" I hoped that these students would find out as much as possible, not merely about the research on social constructivism and the concepts of ubuntu, OBE and the African Renaissance, but particularly about their possible relationships with and value for co-operative learning as an educational practice.

## THE CO-OPERATIVE LEARNING PROCESS

The class decided to divide the question amongst four co-operative groups, each group researching a particular area of the question instead of concentrating on the question as a whole. During the ensuing progress sessions and particularly at the last contact session, the groups were to exchange information, findings and conclusions.

The programme ran without any major hitches. Groups reported on their progress on a weekly basis and engaged in lengthy discussions on their interim findings and how they were to proceed. I kept a low profile, only asking a question and rendering advice on possible sources of information when necessary.

By week four all the groups had their mini papers ready and presented them to the plenary. Both the amount of discussion, and its depth and quality, exceeded my expectations. The literature searches and overviews, as well as the ensuing level of discussion and debate, were of a very high standard.

The following paragraphs briefly record the findings of the four groups of students.

### Response from Group 1: Social constructivism and co-operative learning

Group 1 contended that a social constructivist view of learning has its philosophical roots in the work of Mead (1934) and Wittgenstein (1953), articulated by the work of Dewey (1968) and Harré (1984). These authors share with Kuhn (1962) the epistemological view that knowledge is a social artifact which is maintained through a community of peers. Based on this view, Bruffee (1984; 1986) proposes that knowledge is not based on an objective reality that can be measured and quantified; rather, it is consensually formed through social interaction.

The socio-psychological roots of social constructivism are based on the theories of Vygotsky (1962; 1978; 1993) and others. Social constructivist views of learning are related to the idea that knowledge is constructed by interactions of individuals within society and that thought is social in nature (Vygotsky 1986; Williams 1989). Learning is the result of the internalisation of social interaction. In Vygotskian terms this (learning) process is described best by a movement from the interpsychological plane (between or among individuals) to the intrapsychological plane (within an individual). Learning occurs within a zone of proximal development (ZPD), which is the distance between a learner's actual development level, as determined by independent problem solving, and his/her potential development with guidance from "a capable other", or in collaboration with "more capable peers" (Vygotsky 1978). Both the role of dialogue in learning (Cazden 1988; Edwards & Mercer 1987), and the role of peers in

educational practices (Damon & Phelps 1989) have become more prominent. The rationale for engaging peers in learning is based on the notion that because of the social nature of learning, opportunities to interact should be created. Peer interaction makes the implicit nature of social learning explicit by encouraging active learning within social settings (Hertz Lazarowitz & Miller 1992).

Group 1 concluded firstly that Vygotsky's research, and that which followed, had opened new possibilities to the promotion of learning. The construct of the ZPD in particular, reminds educational practitioners that there is nothing "natural" about educational settings and educational practices such as ability groupings, tracking and other forms of stratification. These settings are all social in nature, socially constituted and can be socially manipulated. It is easy to underestimate children's and educators' abilities when analysed in isolation, in highly constrained environments or in less favourable circumstances. It points to the use of social and cultural resources as our primary tools for mediating and promoting change.

Secondly, Group 1 related Vygotsky's research to the question of authority. Peers are a major source of non-supervisory assistance, and at every level of schooling, non-supervisory influences can be structured to maximise the coherence of the overall assistance provided by the school. This principle is foundational to the co-operative learning movement. Good design and management of assisted performance create productive learning settings.

Thirdly, Group 1 focused on the role of the educator in co-operative learning. Vygotsky's (1978) concept of mediation of learning is a useful way of viewing the optimisation of the learning process. After the educator's presence during the learning transaction, his/her primary role is to support the transaction as a mediator. Thus the educator assists in problem solving, not by offering templates, algorithms or solutions, but by asking questions, offering hints, pointing out anomalies, calling attention to overlooked information and supporting learners as they synthesise material into new concepts and schemas. The group also related Vygotsky's concept of mediation to Feuerstein's theory of mediated learning experience (Feuerstein et al 1980).

### Response from Group 2: Ubuntu and co-operative learning

This group primarily followed the argumentational line of Mnyandu (1997) on the concept of ubuntu: According to the African world view, *umuntu* (human being) comprises the essential elements *umzimba* (body), *umphefumulo* (soul), *umoya* (breath), *amandla* (force, energy), *inhliziyo* (heart, emotions), *umqondo* (intellect, thinking), *ulwimi* (speaking) and

*ubuntu* (humaneness). All these qualities are required to distinguish *umuntu* (human being) from *izinto* (thing). The four latter elements are also intended to survive death, at which time they become manifest in the *umphfumulo* (shadow, spirit) as the new spiritual embodiment.

The people of Africa consider ubuntu to be the most important quality of umuntu, the quintessence of human existence (Mnyandu 1997). The person possessing the greater degree of ubuntu is extolled as being caring, humble, thoughtful, considerate, understanding, wise, godly, generous, hospitable, mature, virtuous and blessed. Conversely, the absence of ubuntu leads to tension, conflicts, frustration and disintegration of basic human relationships and community, because ubuntu does not merely represent positive human qualities; it is the very human essence itself, which enables human beings to become *abantu* or humanised beings, creating harmonious relationships in the community and the world beyond.

Mnyandu quotes Mbiti (1973), who contended that in traditional African thinking and cultural practices, the (village) community was the context and focus of all human activities. The primacy of the community over the individual is best summed up by the well known saying: "I am, because we are: and since we are, therefore I am." Individuals are born out of and into the community, through which they are socialised into becoming responsible human beings (*abantu*), endowed with humaneness (*ubuntu*), which exists prior to the individual.

Group 2 also explored Makgoba's arguments (*Sunday Times* 27 October 1996). He presents ubuntu as an alternative view to the liberal democratic system of governance in South Africa. He argues that liberal democracy belongs to Europe. The main deficiency of European democracies is that they cannot handle race as element of democracy. Liberal democracies embody a reductionist and materialistic world view and they have a disdain for morality and spirituality, over emphasising the individual above the community and struggling with a profound crisis of authority. Ubuntu is the only philosophy that transcends both race and culture, and consequently Makgoba defines it in terms of the respect it demands for the non material order that exists in and among us; the respect it fosters for oneself, others and the environment; its non racial character; its respect for cultures, and as the invisible force which unites Africans worldwide.

Responding to Makgoba's article, Fowley (*Sunday Times* 3 November 1996) states that ubuntu is at best an ethical principle and not a fully fledged philosophy. His view is that it has the same ideals as liberalism, namely individual liberty and social justice. Clayton finds little or no evidence that African civilisation, through ubuntu, has been able to trans-

ced race and culture, or has delivered freedom with opportunities while addressing values and cultural systems: "In a subsistence environment, ubuntu represents a culture admirably suited to the survival of the extended family group. But its strengths become weaknesses in complex and competitive societies" (*Sunday Times* 1996:22).

Group 2 endorsed Smit's conclusions regarding ubuntu (1999) as a "balanced view" of ubuntu's representation of African communalism and Western individualism not only for the sake of social reconstruction in South Africa, but particularly for its implications in education and co operative learning. Smit suggests that somewhere in between centralised collectivism and self centred individualism a new paradigm will have to be developed and adapted to African communalism in order to fight the egocentric individualistic relativism. Forfeiting the positive contents of individualism (individual rights and freedoms, authenticity, emphasis on personal achievement and personal responsibility) would be a loss. Smit stresses the promotion of a common denominator in values. He adds: "Whatever the ideals of a country, the way to materialise them runs through the schools and tertiary institutions" (Smit 1999:26).

Group 2 related the concept of ubuntu to two essential components of co operative learning, namely positive interdependence and promotive interaction (Johnson & Johnson 1994). The element of individual accountability in co operative learning, on the other hand, was traced to the concept of individualism as contextualised by Smit (1999). They argued firstly that for co operative learning to succeed, learners must be aware that they should work and produce together for mutual gain and survival. The individual will not succeed unless everyone succeeds, while each member's efforts benefit all other group members as well. Learners' vested interest in one another's achievement will result in their sharing of resources, assisting each other's efforts, providing mutual support and celebrating their joint successes.

Once positive interdependence is established and internalised to the group's functioning, the ubuntu concept has a second implication, namely the opportunity for the members of a co operative group to promote and celebrate each other's success by helping, assisting, supporting, encouraging and praising one another's efforts. Similarly, cognitive activities and interpersonal dynamics occur only when learners become involved in promoting each other's learning (Johnson & Johnson 1994).

Group 2 concluded that individual accountability, the third essential component of co operative learning, is related to individualism rather than to collectivism. One of the underlying assumptions of ubuntu, namely that *human beings are what they do* (Mnyandu

1997), emphasises that it is the individual who expresses him or herself "... in the personal deeds and attitudes which reveal the inner quality of one's humanity" (Tempels in Mnyandu 1997:80). This, in turn, constitutes individual responsibility for actions and deeds. In co operative learning learners are held individually accountable to do their share of the work. Individual accountability operates when the performance of each individual learner is assessed and the results returned to the individual and the group. Individual accountability ensures that the members of co operative groups know who needs more assistance, support and encouragement in completing assignments. Everyone realises that one cannot "hitch hike" on the work of others.

### **Response from Group 3: OBE and co-operative learning**

Group 3 discovered multiple conceptualisations of OBE. Parker, for instance, refers to OBE as a "holistic approach" to education, involving learning outcomes (rather than teaching inputs), which means focusing on what learners can actually do with their learning, as well as the integrated assessment of outcomes and the understanding of curriculum as a learning environment rather than as a blueprint (Lubisi, Wedekind & Parker in Gultig (ed) 1997:109).

Malcolm (in Jansen & Christie 1999:78) regards OBE as "... first and foremost a management system – an approach to managing curriculum control, curriculum design, assessment and reporting, teachers and accountability, change and innovation ...". OBE appeals to different interest groups in different ways, depending on what each group wants to see managed and achieved. He cites Apple (1993) and Manno (1997) to indicate that OBE appeals to multiculturalists, feminists, environmentalists, teaching professionals and post modernists alike.

Van der Horst and McDonald (1997:7) describe OBE as "... an approach which requires teachers and learners to focus their attention on two things ... the desired end results of each learning process ... [and] ... instructive and learning processes that will guide the learners to these end results". They regard OBE as a learner centred, results oriented approach, in which

- learners should be allowed to learn to their full potential;
- positive and ongoing assessment should promote student confidence;
- learning environments should be inviting, challenging and positive; and
- multiple stakeholders, like teachers, learners, parents and the "community" should share the responsibility for quality learning.

Group 3 indicated that the National Qualifications Framework (NQF) provides the general principles

which underscore the OBE approach. These principles entail lifelong learning, flexible education and training structures, the integration and transfer of learning and the need towards critical crossfield and specific outcomes, and competence (Lubisi, Wedekind & Parker in Gultig 1997). Particularly the principle of critical crossfield outcomes was further explored by the group. They analysed different viewpoints on the concept of critical outcomes and related them to co operative learning. Thus they illustrated the underlying philosophies of critical crossfield outcomes and pointed towards the role played by co operative learning in promoting these philosophies.

One critique, highlighted by Group 3, was Skinner's argument (in Jansen & Christie 1999) that critical outcomes are based primarily on *economic pragmatism*, a philosophy embracing conservative, scientific theories with limited explanatory power for the multifaceted needs of South Africa. The rise of this philosophy through the NQF and OBE has a potentially negative effect on all of the social sciences and especially education. Skinner reiterates that despite the desire on the part of leadership to make education a means of redress and transformation, a close reading of policy documents since 1994 shows that education policy sees both the ends and the means of education largely in economic terms. He would rather see critical outcomes institutionalised in all educational programmes for different reasons than economic ones only.

This returned Group 3 to the relationship of OBE with co operative learning. Firstly they argued that co operative learning could play a major role in promoting critical crossfield outcomes, both directly and indirectly. In planning and structuring co operative learning opportunities well, educators could mediate the development of

- communication skills, by supporting learners to produce and respond to both simple and complex communications;
- problem solving skills, by supporting learners to identify, clarify and solve problems in groups; and
- personal and interpersonal skills, by enabling learners to work and maintain working relationships with others in co operative groups.

Secondly, Group 3 related co operative learning to a systems approach, avowing the fact that co operation also lies at the heart of all successful economic systems (Johnson & Johnson 1994). As members of a company work co operatively to achieve mutual goals, while different companies work together to conceptualise, manufacture, market and improve products, the fostering of co operative learning develops learners' abilities to distinguish among roles, divide tasks, synergise efforts, co ordinate systems and promote healthy and positive interdependence.

Thirdly, Group 3 related new approaches to assess

ment being introduced by OBE to co operative learning. Assessment as promoted in co operative learning could play a major role in realising the objectives of OBE (cf Johnson & Johnson 1996). For example:

- Learners themselves are a natural source of help and assistance to educators making use of labour intensive performance, authentic or total quality assessment practices;
- Learning in co operative groups allows for assessment that cannot be used when learners work alone, individualistically or competitively;
- Co operative learning groups enable educators to assess diverse learning outcomes such as critical thinking and level of reasoning, skills performance, knowledge communication, interpersonal and small group skills, self esteem and self efficacy, and commitment to producing quality work;
- Co operative learning provides additional sources of information, like self and peer assessment, along with that of the educator;
- Co operative groups offer a setting in which learning, assessment and continuously increasing achievement can all be part of one process; and
- An opportunity is created to assess group as well as individual outcomes.

#### **Response from Group 4: the African Renaissance and co-operative learning**

To Group 4, the term "African Renaissance" signifies the fusion of Africa and the West for the African continent to be reborn in the way that Europe awoke after the "dark" Middle Ages. The African Renaissance is by no means a paradoxical concept. Taking present day realities into account, it is not difficult to envisage the rebirth of an Africa which is partly steeped in Eurocentric and Westernised thought, language, economy and education. The great renewal could come about as a unique process through which the best of the West is grafted onto the typical heritage of Africa. The much desired rebirth of Africa could very well depend on the germination of a new ethos instilled in its people – the ideal of merging an essentially sophisticated, intellectually and scientifically developed West with the rich, unspoilt traditions of Africa. The obvious point to start cultivating this symbiosis, is the classroom.

Group 4 argued that education is indeed a keen contender for the immediate and effective implementation of the idea of the African Renaissance. By planning and managing this fusion of the best of different cultures in true global fashion, a mighty new Renaissance community, a new humanity, could be born and bred in our schools. The integration of the African concept of ubuntu with the principles of social constructivism is no pipe dream. It only remains to be described and introduced: marrying Vygotsky's social constructivist theories of learning in

social context with the age old ubuntu wisdom of learning and living together in a supportive, congenial group relationship.

Drawing on the work of Vale and Maseko (1998:6) Group 4 reported that the African Renaissance is still seen by many as devoid of policy content, and "more promise than policy". Here educationists can play a pivotal role to form the basic approach to all future schooling, training and higher education. Learners in Africa must be exposed to the African world, to its magic and its myths, its ways of life – which are in many ways superior to those of the modernised West – but also to its weaknesses.

The five areas of engagement for attaining the ideal of an African Renaissance, are summed up by Vale and Maseko (1998:2) as follows:

- Encouragement of cultural exchange;
- The emancipation of women from patriarchy;
- Mobilisation of the youth;
- Broadening, deepening and sustenance of democracy; and
- Initiation of sustainable economic development.

Group 4 contended that success is within reach in all these fields. This could happen within a relatively short time span, if familiarization with these goals (and ways of implementing them) are introduced forthwith. This will depend on Africa's peoples being raised and educated in a new tradition: that of an Euro Afro fusion with a strong work ethic, a commitment to progress as well as to one another, a meaningful spiritual component in their daily outlook, and a vision of being part of the miracle of the African Renaissance. Learners in all teaching learning situations, and at home, should be introduced to an ethos of the mutual appreciation of one another's cultural habits, literature and folk lore, while at the same time discovering the value of shared experiences, common values and interests, and the wealth of companionship and camaraderie among people. This is where the application of ubuntu in combination with social constructivism offers the richest possibilities for raising a nation in the best of a number of traditions, all operative on African soil.

Group 4 pointed out a warning. Ntuli states: "... (t)he spirit of *ubuntu* and its practice have disappeared" (Makgoba 1999:184), but he continues: "... that is why Africa must have a renaissance". It seems that the true African heritage runs the risk of being underplayed and even outweighed by Western influences. Here the school classroom can become the treasure house where the African spirit is not only re-discovered, but made operative and productive, together with the gains of Eurocentric thought. The final, complete westernisation of Africa will impoverish a continent, robbing it of its original richness and indigenous wisdom. This should be countered by a

sensible, balanced education, with a strong and intelligently combined Euro African character.

Group 4 believed that a powerful epistemological shift is on the way. According to *The Sunday Independent* (28 September 1998) "... it involves the search for an understanding of human relations ... recognising the diversity of cultural values it represents. To play this role, a renaissance must represent both discipline and liberation". But how exactly can the daily diverse teaching learning activities meet the ideals of the African Renaissance?

The group noticed a remarkable similarity between Mbeki's ideals for the African continent, the character of ubuntu, and the principles of social constructivist learning. They outlined the essence of the relationship thus:

### **Cultural exchange**

Social skills development will promote intercultural relations. Acquiring tact, cultivating respect and appreciation for the "Other" will facilitate mutual understanding and interaction at all levels. Cooperation is impossible without cultural exchange being effected and/or fostered.

### **Emancipation of women from patriarchy**

Positive interdependence will teach females of all age groups to risk taking on leadership roles, and trust themselves as initiators and achievers. In the cooperative context boys and men will learn to accept and appreciate this. Through the learning situation deconstructing a singular, authoritative (mostly male) voice, females will learn to regard equal participation in any project as natural and acceptable.

### **Mobilisation of the youth**

By stimulating and utilising the dynamics of group processes, facilitators expose learners to situations where they are trained and challenged to generate ideas and solutions. They acquire the habit of thinking creatively as members of a peer group, and learn to cooperate in dealing with the problems of putting their ideas into practice. A healthy balance between individual competition and joint efforts is developed.

### **Broadening the concept of democracy**

Individual accountability is promoted, as a by product as well as an aim of cooperative learning, in situations demonstrating that the privilege of free speech and free participation is counter balanced by responsibilities. Members learn to trust and be trusted,

to choose and follow leaders, to criticize and lobby, or to take whatever steps are necessary if things do not work out. They learn to be responsible, alert, active and worthwhile citizens who exercise and appreciate their privileges and responsibilities alike.

### **Initiation of sustainable economic development**

Learners' interaction will prepare them for future citizenship, sensitivity to one another's needs, working towards their own good and that of their country, in caring for the environment. The interaction and shared interests will enhance the awareness of present needs and future problems, and introduce learners on an elementary level to methods of planning and ensuring sustainable economic development. Learners will take note of how the well being of a society is interdependent on the caring displayed by its members.

### **CONCLUSION**

My initial concern that the BEd students might not be properly exposed to and intellectually engaged in the realms of cooperative learning, was one area I wanted to explore by means of this case study. The other was the question whether these educators to be and practitioners were being stimulated or inhibited in their inquiry into the theories they were investigating.

All my observations pointed to the fact that the BEd students profited enormously by engaging in a cooperative learning process themselves when answering the research question. Their sharing, debating and developing of perspectives within and among groups revealed how a number of the elements of cooperative learning were emerging. I saw positive interdependency developing; I noticed students being held individually accountable for contributions and segments of the research; I observed group processing and social skills being demonstrated in both task and teamwork. Where I sensed a lack of leadership, communication and decision making skills, I pointed it out to students, alerting them to similar situations in their own classrooms.

We came to the mutual conclusion that the real challenge was to apply cooperative learning productively, firstly by understanding cooperative learning within the context of changing socio educational thought, and secondly by structuring its essential components into optimum learning activities and experiences not only in the classroom, but at all levels of the institutional environment.

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## REFERENCES

- Apple, M W 1993. The politics of official knowledge: does a national curriculum make sense? *Teachers' College Record* 95(2):5 17.
- Bruffee, K A 1984. Collaborative learning and the "Conversation of mankind". *College English* 46(7):635 652.
- Bruffee, K A 1986. Social construction, language, and the authority of knowledge: a bibliographical essay. *College English* 48(8):773 790.
- Cazden, C B 1988. *Classroom discourse: the language of teaching and learning*. Portsmouth: Heinemann.
- Damon, W & Phelps, E 1989. Critical distinctions among three approaches to peer education. *International Journal of Educational Research* 58(2):9 19.
- Dewey, John 1968. *The quest for certainty*. New York: Minton, Balch and Company.
- Edwards, D & Mercer, N 1987. *Common knowledge*. New York: Methuen.
- Feuerstein, R, Hoffman, M & Miller, R 1980. *Instrumental enrichment*. Baltimore: University Park Press.
- Gultig, J (ed) 1997. *Understanding outcomes-based education. Knowledge, curriculum and assessment in South Africa. Learning Guide*. South African Institute for Distance Education and the National Department of Education.
- Harré, R 1984. *Personal being: a theory for individual psychology*. Cambridge: Harvard University Press.
- Herz Lazarowitz, R & Miller, N (eds) 1992. *Interaction in cooperative groups*. Cambridge USA: Cambridge University Press.
- Jansen, J & Christie, P (eds) 1999. *Changing curriculum. Studies on outcomes-based education in South Africa*. Kenwyn: Juta & Co Ltd.
- Johnson, D & Johnson, R T 1994. *Learning together and alone. Cooperative, competitive and individualistic learning*. Boston: Allyn and Bacon. Fourth edition.
- Johnson, D W & Johnson, R T 1996. The role of cooperative learning in assessing and communicating student learning, in Gusky, T R (ed) *ASCD yearbook. Communicating student learning*. Alexandria: Association for Supervision and Curriculum Development.
- Kuhn, T 1962. *The structure of scientific revolutions*. Chicago: University of Chicago Press.
- Makgoba, M W (ed.) 1999. *African Renaissance. The new struggle*. Sandton: Mafube/Tafelberg.
- Manno, B 1997. *Outcomes based education: how the governors' reform was hijacked*. Indianapolis: Hudson Institute.
- Mbigi, L & Maree, J 1995. *Ubuntu the spirit of African transformation management. NI*. Knowledge Resources (Pty) Ltd.
- Mbiti, J S 1973. *Introduction to African religions*. New York: NY Publishers.
- Mead, G H 1934. *Mind, self and society from the standpoint of a social behaviorist*. Chicago: University of Chicago Press.
- Mnyandu, M 1997. Ubuntu as the basis of authentic humanity: an African Christian perspective. *Journal of Constructive Theology* 3(1):77 91.
- Smit, J H 1999. Ubuntu for Africa: a Christian interpretation. *Scientific contributions of the PU for CHE, Series F: Institute for Reformational Studies. IRS Study Pamphlet No 374:1 29*. Potchefstroom.
- Sunday Times*. 1996. 27 October:22.
- Sunday Times*. 1996. 3 November.
- The Sunday Independent*. 1998. 28 September:10 11.
- Thomas, G 1997. What's the use of theory? *Harvard Educational Review* 67(1):75 104.
- Thomas, Gary 1999. Hollow theory: a reply to Rajagopalan. *Harvard Educational Review* 69(1):51 66.
- Vale, P & Maseko, S 1998. South Africa and the African Renaissance, in *South Africa and Africa: Reflections on the African Renaissance*. Occasional Paper No 17. Braamfontein: Foundation for Global Dialogue.
- Van der Horst, H & McDonald, R 1997. *OBE. Outcomes-based education. A teacher's manual*. Pretoria: Kagiso.
- Vygotsky, L S 1962. *Thought and language*. Cambridge: MIT Press. (Translated by Hanfmann, E & Vakar, G).
- Vygotsky, L S 1978. *Mind in society: the development of higher psychological processes*. Cambridge: Harvard University Press.
- Vygotsky, L S 1986. *Thought and language*. Cambridge: MIT Press.
- Vygotsky, L S 1993. *The collected works of L S Vygotsky. Vol 2: The fundamentals of defectology*. New York: Plenum Press.
- Williams, M 1989. Vygotsky's social theory of mind. *Harvard Educational Review* 59(10):108 126.
- Wittgenstein, L 1953. *Philosophical investigations*. Oxford: Oxford University Press.