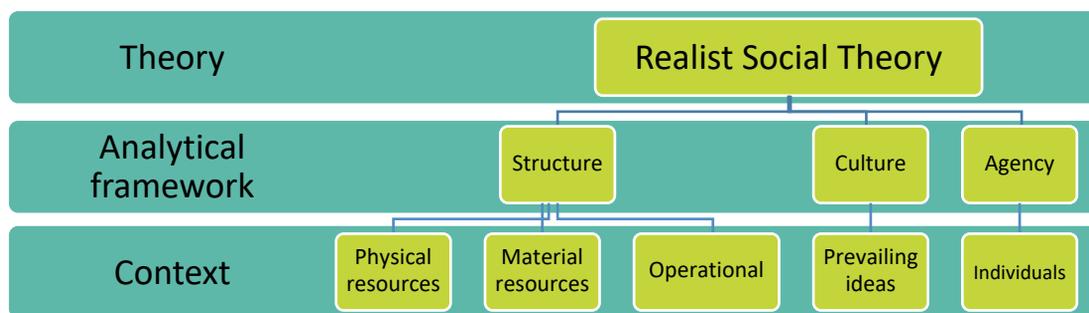


# ENVIRONMENTAL IMPACT TOPICS IN THE SOUTH AFRICAN FURTHER EDUCATION AND TRAINING PHASE

In this study, Sikhilile Msezane explored whether the content coverage and the teaching of 'environmental impact' topics and examination of these topics has been affected by changes in the South African FET phase curriculum.

The study employed a qualitative research design. Data generation methods were semi-structured interviews with six teachers who took part in the Fundisa for Change Environmental Teachers training Programme and analysis of the following documents: the Curriculum Assessment Policy Statements (CAPS), textbooks, and Grade 12 examination papers (2006-2015) to explore the extent of environmental impact topics coverage.

The study utilised Margaret Archer's Realist Social Theory (RST) as an analytical framework (Archer, 1995). RST views reality as complex and recognises the role played by structure, culture and agency to foster relations through mechanisms that influence human behaviour. Hence, RST was used as an analytical framework to help in identifying key aspects of structure, culture and the teacher agency emergent from teaching of environmental impact topics. The diagram below represents the theory employed.



The study found that operational structures, such as the management of the school, affect the way teachers engage with learners on environmental impact topics in the curriculum. For example, if the school management team provides the necessary support such as teaching resources, in many cases teacher's performance improves. The study further revealed that some participants relied on curriculum advisors (CAs) to acquire knowledge of environmental impact topics. The top-down approach to teacher's continuous professional development by the Cas played a significant role in influencing teacher knowledge of environmental impact topics in the school. For example, CAs provide teachers with lesson plan templates that can be used when teaching environment related themes in the classroom. The response above suggests that teachers might develop a culture of relying on external structures to develop knowledge of environmental impact topics.

The study focused on 11 subjects taught in the Further Education Phase. It found that subjects such as Life Sciences, Geography, Agricultural Sciences, Physical Sciences, Business Studies, Economics, History and Mathematics contained environmental impact topics to be taught in the classroom. The study found that these topics were covered in varying percentages within the 11 subjects analysed in the curriculum as shown in Table 1 below. The coverage was calculated as a percentage of environmental impact topics out of the overall number of topics needing to be covered for the subject; and as a percentage of the amount of time allocated to the teaching of the environmental topics against to total allocated teaching time for examined topics (see Table overleaf). Some subjects (History, Accounting, Maths and Maths Literacy and English) had no content of environmental impact topics in the examination and thus have not been included in the table.

	Life Sciences	Geography	Agricultural Sciences	Physical Sciences	Business Studies	Economics
Total number of topics	12	31	41	52	15	20
Total number of environmental impact topics	1	3	1	2	1	2
Percentage coverage	8	10	2	4	7	10
Tuition time allocation for all the topics in the exams (weeks)	28	27	29	29	25	26
Time allocation for environmental impact topics (weeks)	2.5	2	1	2	1	2
% time allocation to environmental impact topics (%)	9	7	3	7	4	8

During interviews all teachers mentioned that the coverage of environmental impact topics in the examinations influenced them to focus on other topics, which were not environmentally oriented in order to prepare learners for the end of year examinations. This suggests that the culture of teaching is predominantly driven by the structure of assessment. The percentage mark allocation for environmental topics had been reduced since 2012 – almost by half in Geography and by 2% in Life Sciences. This could be attributed to an attempt to move closer to policy requirements, as in 2015 both subjects were exactly in line with policy, and the study suggests that the 8% coverage of 2015 is significant and worth highlighting and prioritizing in examination preparation.

The study found that the teaching of environmental impact topics in schools had been enhanced after participation in the Fundisa for Change training in that teachers were now able to employ different teaching methods in their lessons, For example, one teacher noted that deliberative methods, learning by doing, investigative methods, information transfer and experiential methods had helped him to teach environmental impact topics better. The programme also suggested ways in which teachers could deliver environmental impact topics, for example, the use of role playing, exploring indigenous ways of knowing, case studies and awareness campaigns as part of teaching strategies. The teachers felt that the programme could play an important role in providing strategies on how to deliver lessons in large, congested classes such as those commonly found in township schools.

## RECOMMENDATIONS

- Examiners should ensure that EE/ESD content knowledge is adequately covered in all subjects as stipulated by CAPS
- Teachers need to improve the use of available structures (such as teacher developmental programmes and policies) to improve their and learners' knowledge of environmental topics.
- Teachers need to be informed about the policy requirements so as not to be given the impression that environmental learning has little importance.

## REFERENCE

Archer, M.S. 1995. *Realist social theory: The morphogenetic approach*. New York: Cambridge University Press