

The right to education and the internet

Case study on the role of the internet in provision and accessibility of educational resources in South Africa

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¹ For more information, see: https://www.apc.org/en/projects/connecting-your-rights-economic-cultural-and-socia

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1. Introduction

This case study considers the right to education and educational resources via the internet in South Africa. While many jurisdictions have a right to education, in South Africa the right has been central to court cases in which state authorities have been compelled² to provide textbooks. The result is unprecedented jurisprudence which makes explicit issues that have not yet been fully explored in other jurisdictions. South Africa is considered an example of a developing country with both a strong right to education and significant challenges in realising the right to education. While, in a number of provinces, the government is moving towards digitising classrooms and using the internet as the primary way of providing educational resources, it faces challenges in extending internet access to all South Africans.

Like some other developing countries, South Africa has failed to deliver education to all its people in accordance with its human rights obligations. One significant failure has been to provide the learning materials required for education. An important category of such materials is textbooks, but it is not the only category. Workbooks, instructional software and adaptive practice technologies³ are increasingly important. Whether textbooks will continue as a meaningful category of learning materials is itself put in question by developments enabled by the internet. This case study refers to textbooks only as examples of the master category of educational resources.

The right to education is a universal human right. As a socioeconomic right it requires the allocation of resources for its fulfilment. Article 13 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) sets out the right to education: everyone is entitled to primary education with secondary education being made generally available and tertiary education being made progressively available. This case study emphasises primary and secondary education, but, in line with the right, does not exclude tertiary education.

Universal human rights are universal, and therefore they necessarily apply to all experiences and interactions online.⁴ The internet changes the possibilities for educational resources completely. Not all the different components of education are the same. Some can only be used by one or a few people at a time. Only a limited number of learners can fit in a particular classroom. For those learners to be able to use that classroom, others must be excluded. But not all of the components of education are like this. Some components can be used by any number of people at the same time. Only one person at a time can use a copy of a textbook, but any number of people can use the content of the book at the same time. There can be any number of copies. There is no need to exclude someone from a digital textbook for another person to use it. Instead, using the internet, the digital textbook can be reproduced any

²The national and provincial education departments have failed to fully comply with court orders requiring them to supply textbooks to all school children. The courts have expressed no doubt that the departments have supplied many thousands of textbooks to comply with court orders, despite claims by the departments that there was no point to the court orders because the books would have been supplied anyway.

³Adaptive practice technologies allow a student to practise exercises such as maths problems, and depending on the response of the student such as the answer supplied and the time taken, they will supply easier, equivalent or more challenging problems.

⁴It is beyond the scope of a case study of this nature to set out a full theory of universal human rights. The Universal Declaration of Human Rights proceeds on the basis that human rights are vested in all humans, and thus include all human activities. Since the internet is co-constructed by millions of people daily, the human rights of those involved necessarily apply. To reject this conclusion is to reject human rights altogether.

number of times at a cost approaching zero. While not everyone has internet access, making a textbook available on the internet gives everyone with access the option to have a copy.

The internet offers South Africa an important opportunity to make up for many, although not all, of the deficiencies of its educational system in order to fulfil the right to education. Set in the context of global human rights commitments and a global and globalising internet, the specific case of South Africa offers greater understanding of similar challenges elsewhere in the developing world.

This case study focuses on South Africa but considers some global dynamics which affect or are likely to affect South Africa, notably multinational corporations intent on reshaping education. While it analyses South African rights jurisprudence, it is not intended to be a definitive statement of South African law.⁵

2. Right to education

2.1. Definition

The right to education is a fundamental human right⁶ in international law and is entrenched as a fundamental right in the South African Bill of Rights. The right to education was first internationally recognised as a basic human right in Article 26 of the Universal Declaration of Human Rights; this right became legally binding in international law in the International Covenant on Economic, Social and Cultural Rights (ICESCR) in Article 13.

The provisions of Article 13 could be summarised as requiring education directed towards development of the person – through fulfilment of the human rights to free primary education, equal and increasing access to other kinds of education, and freedom to educate children in non-state institutions. Free primary education is so important to the right that it is also dealt with in a separate article, Article 14 of the ICESCR. However, the right does not only include primary education but also increasing and equal access to further education, which includes university education. Article 13 is elucidated by the Committee on Economic, Social and Cultural Rights (CESCR).⁷ The CESCR stipulates that generally education is required by the right to be available, accessible, acceptable and adaptable. One of the aspects of the right is provision of "teaching materials"⁸ – which this case study calls educational resources.

The rights set out in the ICESCR place obligations on a state to provide means for their fulfilment. This, in turn, requires use of financial and other resources by the state. The challenge for states with limited resources is addressed by Article 2 of the ICESCR. The "realisation" of a right is now understood to require at least the following elements, notwithstanding the constraints on available resources:

⁸Ibid., at 6 (a).

⁵While the author is qualified as a legal practitioner in South Africa, and the case study accurately states South African and international human rights law, it is not drafted for forensic or legal advisory purposes. As a result some technical legal details are omitted and some questions proper to a legal opinion are elided.

⁶According to the Office of the United Nations High Commissioner for Human Rights, "human rights are rights inherent to all human beings." Human rights are thus inherently different to other types of rights such as the rights of states under treaties, and rights such as contractual rights which can be held by corporations and transferred.

⁷UN Committee on Economic, Social and Cultural Rights (CESCR). (1999, 8 December). General Comment No. 13: The Right to Education (Art. 13 of the Covenant), E/C.12/1999/10. Adopted at the Twenty-first Session of the Committee.

⁹This development is often referred as progressive realisation so this term is used in the case study. However, it is important to note that it is somewhat misleading since some obligations are immediate.

immediate non-discrimination, no retrogressive measures, minimum obligations, and an obligation to take steps to fulfil the right and report on them. Because providing education is resource-dependent, the government of the day of a particular state does have some freedom in determining how to go about realising the right to education, referred to as a "margin of discretion". This margin of discretion does not permit the current government of a state to take into account irrelevant considerations in realising the right to education; for example, a government official's belief that the role of women is to bear children and therefore that women need not be educated is irrelevant. It also allows a state to take into account relevant considerations such as the requirements of the local job market in realising the right to education.¹⁰

South Africa is a party to the ICESCR. Although South Africa signed the covenant in 1994, it acceded only in January 2015. The development of the right to education in South Africa is discussed later in the case study.

2.2. Right holders and duty bearers

The right to education is held by "everyone" and "all persons", in accordance with ICESCR Article 13 (1). Realisation of the right requires a different entitlement for each level of education. Article 13 (2) (a) of the ICESCR requires that primary education be "freely available" to all, while Article 13 (2) (b) stipulates that secondary education be "generally available" to all, and 13 (2) (c) that higher education be "equally accessible" to all. States which are parties to the ICESCR are the primary duty bearers for these rights that inhere in everyone. When rights holders are children then their parents are duty bearers; they are obliged to enable their children to access the education made available by the state or other education providers.

In addition to the rights that inhere in everyone, some classes of person obtain additional rights. Article 12 (2) (e) gives teaching staff a right to the continuous improvement of their material conditions. States that are party to the ICESCR have a corresponding duty to continuously improve the material conditions of staff. Parents and legal guardians have the right to choose schools for their children, as per ICESCR Article 13 (3). This choice may be constrained only by the standards established by the state that are in accordance with the right to education. State standards for non-state education are generally quality standards; however, they can include standards that prohibit education contrary to the right, such as prohibiting racial discrimination in education. The state is thus obliged to establish standards for non-state institutions so that parents are free to choose schools for the religious and moral education of their children according to their own convictions. The state is similarly obliged to establish standards so that individuals and non-state bodies can offer education as envisaged in ICESCR Article 13 (1), that is, education that enables the full development of human personality and respect for human rights and fundamental freedoms. Educators are thus also duty bearers – the education which they offer must conform to the kind of education described in Article 13 (1). The state may not exempt educators from the requirements of 13 (1).

¹⁰The well-known distinction between a state and government of the day is significant when a state makes a declaration in respect of rights such as the Declaration on Article 13 (2) (a) by South Africa on accession to the ICESCR. If the declaration is unconstitutional, then successor governments are not bound by it.

The duty on the state to respect, protect and fulfil the right to education encompasses a number of interconnected obligations, not only to provide education directly but also to ensure that education procurement practices and the regulation of education realise the right to education. The right to education does not only require provision of education by the state, it also prohibits others from preventing education. Thus the right would operate against an individual or corporation which acted to prevent education. One example of this would be a corporation which prevented access to educational resources, such as an internet services provider (ISP) which disconnected a school because of an allegation of copyright infringement without investigating whether the allegation is true.

3. The internet and education in South Africa

The extent to which approximately 52 million South Africans have access to the internet and the kind of access experienced is not entirely clear. Similarly, data sources for school enrolment and textbook provision are inadequate at best. Nevertheless, South Africa has been the site of a number of pioneering attempts to make use of digital technologies to offer educational services and support, especially to high (secondary) school students.

Approximately 15.9 million people are enrolled in formal education in South Africa. The majority (88%) are in primary or secondary school, while only 2.7% are in vocational training institutions (vocational colleges) and 4.7% in tertiary institutions.¹¹ A major obstacle is lack of educational resources. In 2013 more children at public schools reported lack of books than any other problem in their education.¹² The South African government, through setting curricula, largely determines what is in textbooks, workbooks and the like. The state is also the main customer for the textbooks produced according to its specifications. While a few textbooks are sold to private schools which follow the national curriculum, they have no market power. Instead school textbooks are produced for purchase by the state.¹³ Failure to deliver educational resources, when it occurs, is thus primarily due to the procurement processes of the state.

But to what extent could the internet be used to deliver textbooks to the population? As Table 1 suggests, different sets of data suggest a sometimes noticeably conflicting picture.

¹¹Statistics South Africa. (2015). *General Household Survey 2014*, 17.

www.statssa.gov.za/publications/P0318/P03182014.pdf

¹²Ibid., 19.

¹³Competition Commission South Africa. *Reasons for Decision, Pearson Plc and The Harcourt Education International and Harcourt Assessment Businesses of Reed Elsevier*, Case number: 2007May2952, 2. Note that the author was Intellectual Property Fellow at the Shuttleworth Foundation which brought a public interest intervention in the merger proceedings.

Table 1. Unsettled data: ICT ownership and access in South Africa (2007-2011)					
Stats SA Census	2007	2011			
Cell phone ownership	73.3%	88.9%			
Households with fixed line	17.2%	14.5%			
Households with computer	13.9%	21.4%			
Households with radio	79.5%	67.5%			
Households with television	66.5%	74.5%			
Households with internet	NA	35.2%			
RIA Household Survey	2007	2011			
Households with internet	4.8%	19.7%			

Table 1. Unsettled data: ICT ownership and access in South Africa (2007-2011)

Source : Cloete and Gillwald¹⁴

Individuals (15+) with internet

According to South African state statistics for 2013 - in a more recent study than those cited in Table 1 - some 40.9% of households had some kind of access to the internet, although there is much greater access in urban areas and very low access in rural areas.¹⁵ More people access the internet by mobile phone than by any other means.

15%

33.7%

Regardless of the source, the available data suggest a trend of rapidly increasing internet access. Most access is by mobile phone. However, internet access is changing quickly: it is predicted that by 2019 at

¹⁴Cloete, N., & Gillwald, A. (2014). South African Informational Development and Human Development: Rights vs. Capabilities. In M. Castells & P. Himanen (Eds.), *Reconceptualizing Development in the Global Information Age*. Oxford: Oxford University Press.

¹⁵Statistics South Africa. (2015). *General Household Survey 2014*.

least 50% of the population – a projected 27 million people – will use the internet.¹⁶ Smartphones will be 30% of all networked devices.

This is however an extremely volatile and unpredictable sector as shown by the rise and fall of Mxit. The history of Mxit illustrates in concrete terms how rapidly a particular technology can be adopted in South Africa, how even relatively simple technologies can be deployed for education, and how quickly technologies may be displaced. Mxit was founded in 2005, and offered messaging software that worked on feature phones. The associated service enabled mobile phone users to send messages at a tiny fraction of the cost of SMS. Users could also post to forums. By 2011 Mxit claimed 27 million users, primarily in Africa, who sent 22 billion messages and spent an average 45 hours a month on the platform.¹⁷ At the time it was Africa's largest social network. Using Mxit was not technologically the same as using the internet, but it was an ingenious hybrid that gave millions some of the functionality of the internet. However, by July 2015 the number of users registered with Mxit had dropped to 1.5 million, and in October 2015 the commercial service was shut down.¹⁸ Commentators suggest that the demographic that adopted Mxit on feature phones are early adopters of smartphones.

The impact of these rapidly changing trends on the provision of educational resources online is clear. A number of innovative projects aimed to make use of the ingenuity of Mxit which reduced both data use and associated costs. For instance, Ukufunda, a collection of learning aids and services accessible via mobile phone, started as a joint initiative of UNICEF, Mxit and the South African Department of Basic Education.¹⁹ When commercial operation of Mxit ceased, the intellectual property was given to the Reach Trust, which continues to offer mobile health- and education-related services including Ukufunda. However, the potential for using Mxit as a mass education tool was significantly reduced.

Despite this volatility, the internet remains a viable resource for realising the right to education. The potential of the internet to provide educational resources in South Africa is best demonstrated by Siyavula, an educational technology company started in South Africa.²⁰ Siyavula offers an intelligent practice service for mathematics and science subjects. Intelligent practice uses adaptive learning technology to tailor instruction, sequence, difficulty and type of problem presented to the individual student. These services are available on feature phones. Siyavula has also produced open-licensed textbooks and workbooks. During a crisis in textbook supply Siyavula was able to rapidly supply workbooks to students who had not had textbooks for several months.²¹

During 2015 the wealthiest province in South Africa, Gauteng, began a project that has resulted in distribution of internet-enabled tablets to approximately 61,000 students at over 375 schools. The tablets are restricted from accessing social networks such as Facebook, but there is no limit to the amount of data that can be accessed via the tablets. This is important, as data limits set by service providers are

¹⁶Cisco Visual Networking Index 2015.

¹⁷Atagana, M. (2011, 22 September). Exclusive: Alan Knott-Craig Buys MXit, Herman Heunis Steps down. *Memeburn.* memeburn.com/2011/09/exclusive-alan-knott-craig-buys-mxit-herman-heunis-steps-down/

¹⁸Thomas, S. (2015, 23 October). Mxit Shuts up Shop, Donates IP to Charity. *Memeburn*. memeburn.com/2015/10/mxit-confirms-its-shutting-up-shop/

¹⁹Alfreds, D. (2014, 30 September). Mxit Aims for Tech in Education. *Fin24*. www.fin24.com/Tech/News/Mxit-aims-for-tech-in-education-20140930

²⁰The author has provided copyright advice to Siyavula (Pty) Ltd.

²¹www.siyavula.com/our-products/, accessed on 4 December 2014.

common in South Africa. Although it is too soon for empirical results on the extent to which the introduction of the tablets improves education, the project demonstrates political will to use technology to enhance education. In particular, the deployment of internet-enabled tablets is portrayed by the Gauteng government as good in itself and a marker of progress.²²

It is important to note that not one of the enterprises and projects discussed has sought to replace classroom instruction with an online substitute. Instead each has sought to use the internet and associated digital technologies to provide educational resources or enhance classroom education in some other way. The use of the internet for education is demonstrably not primarily about replacing the classroom experience, and any analysis which assumes that it is will be flawed.

4. The right to educational resources online: The current situation

4.1. Links between the right to education and other rights

The right to education is the right to a particular kind of education. The right to education in ICESCR Article 13 (1) is the right to an education that is "directed to the full development of the human personality and the sense of its dignity," that "shall strengthen the respect for human rights and fundamental freedom," "enable all persons to participate effectively in a free society" and "promote understanding, tolerance and friendship among all nations and all racial, ethnic or religious groups." The right to education is intended to result in strengthening the other rights and the sources of human rights in inherent dignity, freedom and equality. Education is thus viewed as integral to the realisation of human rights. Even before the ICESCR was conceived, the Universal Declaration of Human Rights committed the members of the United Nations General Assembly to "strive by teaching and education to promote respect for these rights and freedoms." General comment number 13 on the right to education in Article 13 of the ICESCR emphasises how education enables other rights: education is both a human right in itself and an indispensable means of realising other human rights. As an empowerment right, education is the primary vehicle by which economically and socially marginalised adults and children can lift themselves out of poverty and obtain the means to participate fully in their communities. Education has a vital role in empowering women, safeguarding children from hazardous labour and social exploitation, promoting human rights and democracy, and protecting the environment and controlling population growth.

The rights to freedom of expression and to education are related in a number of ways. A person cannot assert a right that she does not know about. People must thus be educated about their rights to use them. Education is like freedom of expression in that it is a strategic right that enables the assertion of other human rights. Education, at least education as envisaged by human rights documents, requires the "freedom to seek, receive and impart information and ideas of all kinds" (Article 19, International Covenant on Civil and Political Rights). Freedom of expression explicitly includes communication "orally, in writing or in print, in the form of art, or through any other media." Freedom of expression thus relies on literacies and access to media. This latter aspect of freedom of expression is particularly relevant to the internet, which in turn affects the right to education.

²²Areff, A. (2015, 20 July). Uncapped Data, Tablets for Gauteng Schools. *TechCentral.* www.techcentral.co.za/uncapped-data-tablets-for-gauteng-schools/58348/

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Another right closely connected to the right to education is the right of everyone to benefit from the progress of science and technology set out in Article 15 (1) (b) of the ICESCR. States have a duty to take steps for the diffusion of science. Education is one of the primary ways in which science can be diffused to holders of the right, namely, everyone. The Special Rapporteur on the right to culture cites Siyavula's use of open licences as the kind of approach that "can bring intellectual property regimes into alignment with the right to science and culture."²³ The report points out that open licences can have a profound effect on the dissemination of knowledge.

4.2. Current relevant rights frameworks and gaps

4.2.1. The provision of textbooks and the right to education in South Africa

South Africa has a fully justiciable Bill of Rights: all rights including economic, social and cultural rights can be enforced through the courts. Most economic, social and cultural rights are subject to progressive realisation. However, in South Africa the right to a basic education, as per Section 29 (1), is not subject to progressive realisation;²⁴ instead the state has an absolute obligation.²⁵ Other aspects of the right, such as the right to further education, are subject to progressive realisation. In South Africa the right to education has both "positive" and "negative" aspects. The negative right ensures "people are not prevented from accessing existing educational resources"²⁶ and may impose duties on private persons and corporations.²⁷

On accession to the ICESCR on 15 January 2015, South Africa made a declaration that it would give progressive effect to the right to education in Article 13 (2) (a) and Article 14 within available resources. This declaration, whatever its effect in international law, does not diminish the immediate constitutional right in South Africa to basic education, since a declaration to an international instrument does not amend the Constitution. The Constitution remains the supreme law; as a result law and action inconsistent with it are invalid (Section 1 of the Constitution of 1996).

Section 29 (1) does not state that education should be free, unlike Article 13 of the ICESCR. Article 14 of the ICESCR requires states which do not offer free education on becoming party to the ICESCR to develop a detailed plan within two years. The declaration by South Africa that it will give effect to the right through progressive realisation "within the framework of its National Education Policy" may be understood as a claim that the National Education Policy is the detailed plan required by ICESCR Article 14. However, whether it meets the requirements of ICESCR Article 14 has not been authoritatively

²³Shaheed, F. (2015). *Report of the Special Rapporteur in the field of cultural rights Farida Shaheed: Copyright policy and the right to science and culture*. Office of the High Commissioner for Human Rights (OHCHR). Human Rights Council 28th Session, UN General Assembly, New York.

²⁴Section 29 (1) Constitution of the Republic of South Africa, 1996, Chapter Two. This obligation is discussed in Constitutional Court of South Africa (2011, 11 April). Governing Body of the Juma Musjid Primary School & Others v Essay N. O. & Others (Centre for Child Law & another as Amici Curiae) [2011] ZACC 13; 2011 (8) BCLR 761 (CC), para 37.

²⁵Woolman, S., & Bishop, M. (2014). The Right to Education. In M. Chaskalson et al. (Eds.), *Constitutional Law of South Africa*, 2nd Edition, Vol 4, 57-10. Cape Town: Juta.

²⁶Ibid. Vol 4, 57-8.

²⁷Ibid. Vol 4, 57-9.

decided. Since the right to basic education is not subject to progressive realisation there is an intense unresolved debate whether education in South Africa should be free to all.²⁸

South African courts have developed the right to education to require provision of educational resources in basic education. Three related decisions give cumulatively stronger statements of the requirement.²⁹ In the first decision, made in response to an urgent application, the court pointed out that the government officials responsible had themselves publicly emphasised the importance of educational resources for education. The judge added that "it is difficult to conceive, even with the best of intentions, how the right to basic education can be given effect to in the absence of textbooks."³⁰ As a result the court ordered the government officials to not only provide the textbooks by specific deadlines but also to ensure that learners were not prejudiced by the failure to provide them with textbooks. Despite this order, two years later government officials again failed to ensure provision of textbooks in a timely manner for a large number of schools and their learners. When the case went to court the government argued that failure to provide textbooks did not constitute a violation of the right.³¹ The court ruled that "[t]extbooks are essential to all forms of education" and as a result "are therefore a component of basic education."³² The government appealed the ruling. The appeal court held that it is a duty of the state to provide every learner with every textbook prescribed for a course before the course begins.³³

The second court pointed out that paper books require far less in the way of supporting technology than internet communications, and gave its opinion that in South Africa books have not yet been replaced by internet-based resources – instead books and electronic information are complementary.³⁴ The appeal court emphasised that the advent of electronic reading materials has increased the importance of reading, and adopted a definition of textbooks which defines something as a textbook according to the information and activities contained in it.³⁵ For the appeal court, a textbook is not defined by whether it is paper or electronic.

The negative aspect of the right of education against prohibitions on accessing existing resources is particularly important for digital and internet educational resources. If any number of people can use a digital textbook simultaneously, there is no need to ration it. If there is no need to ration the textbook, can there be any constitutional justification to restrict use of the textbook? Excluding someone from a digital or internet educational resource cannot be justified by the inherent limits of the resource.

²⁸For an extensive review of the debate see Woolman, S., & Bishop, M. (2014). Op. cit. Vol. 4, 57-24 and the sources cited for the contours of the debate. Even those, such as Woolman and Bishop, who argue that fees are constitutionally defensible in South Africa concede that "[n]o person should be denied a basic education because his parents cannot afford school fees."

²⁹An account of the factual circumstances, the specificities of South African school administration such as "fee" and "no fee" schools and the constitutional jurisprudence involved is beyond the scope of this case study.

³⁰North Gauteng High Court, Pretoria (2012, 17 May). Section 27 and Others v Minister of Education and Another (24565/2012) [2012] ZAGPPHC 114 at §25.

³¹North Gauteng High Court, Pretoria (2014, 5 May). Basic Education For All and Others v Minister of Basic Education and Others (23949/14) [2014] ZAGPPHC 251 at §44.

³²Ibid.,at §51.

³³Supreme Court of Appeal (2015, 2 December). Minister of Basic Education v Basic Education for All (20793/2014) [2015] ZASCA 198, order 3 of the court.

³⁴North Gauteng High Court, Pretoria (2014, 5 May). Op. cit. at §47-51.

³⁵Supreme Court of Appeal (2015, 2 December). Op. cit., Judgment, §1 & 2.

4.2.2. The right to education and the internet

In 2012 the United Nations Human Rights Council affirmed that "the same rights that people have offline must also be protected online."³⁶ We argue that the right to education is entitled to as much protection online as it is offline. Building on its previous statement the Council affirmed in 2014 that "quality education plays a decisive role in development, and therefore calls upon all States to promote digital literacy and facilitate access to information on the Internet, which can be an important tool in facilitating the promotion of the right to education."³⁷

The right to education has four "interrelated and essential features": availability, accessibility, acceptability and adaptability.³⁸ As elucidated in the General Comment on the right to education, these features have implications for the internet and related technologies. Availability of education requires "teaching materials" and in at least some cases "computer facilities and information technology". Accessibility has three dimensions: non-discrimination, physical and economic. Physical accessibility can be achieved "by attendance at some reasonably convenient geographic location (e.g. a neighbourhood school) or via modern technology (e.g. access to a 'distance learning' programme)." Acceptability means at least that the education should not endanger the health or well-being of the child, for example, through excessive or inappropriate punishment. Adaptability requires education to change to meet the needs of changing societies and students. The General Comment illustrates how the right to education applies: a state is required to "fulfil (provide) the adaptability of education by designing and providing resources for curricula which reflect the contemporary needs of students in a changing world" and fulfil (provide) the availability of education by "providing teaching materials."³⁹

Basic education has historically been understood to include at least basic numeracy and literacy. However, in a global economy in which internet access increases economic, cultural and social opportunity, familiarity with and ability to use the internet is itself a component of basic education. The internet itself is an unparalleled medium for the communication of information, and thus for the provision of educational resources (referred to as teaching materials in the comments).

Educational resources such as textbooks can be made much more readily available through the internet. A textbook that is made available via the internet is then immediately available to any person with an internet connection. This increases availability dramatically at very small cost to the state. Of course this does not mean that merely by making a textbook online a state has discharged its obligation to make it available.⁴⁰

³⁶Human Rights Council (2012, 5 July). Resolution 20/8. The promotion, protection and enjoyment of human rights on the Internet (A/HRC/20/L.13).

³⁷Human Rights Council (26th session) (2014, 20 June). Resolution on The promotion, protection and enjoyment of human rights on the Internet (A/HRC/RES/26/13).

³⁸Committee on Economic, Social and Cultural Rights. (1999). General Comment 13, The right to education (article 13 of the Covenant), §6.

³⁹Ibid., §50.

⁴⁰Even if each student had a suitable internet-enabled device, electrical power and an internet connection, it would not follow that a digital version of a textbook is preferable to a paper copy. That claim relies on unwarranted assumptions about pedagogical methods, learning styles and the skills of students to make use of online resources. It is equally unwarranted to make the opposite claim that a particular teacher's preference for a paper book is more than a preference and instead an unassailable fact of human nature.

Whether digital educational resources are more pedagogically effective than paper-based educational resources is an empirical question. Better still, it is a series of empirical questions which cannot but yield different answers depending on the specifics of what and how and where and by whom the resources are used. However, in a situation in which textbooks are made available through distribution of paper books, making the same textbooks available online makes them available to many more people, including learners who have not received a particular textbook, learners who have lost a textbook, parents and others who assist learners, and adult students. Accessibility of educational resources is increased if in addition to any existing channels for distribution they are also made available online. Those who have an internet connection but cannot attend school due to geography, ill health, disability or during periods of natural disaster or violence or political unrest can access educational resources that would otherwise be inaccessible.

The acceptability of educational resources can also be enhanced through making them available online in addition to any existing channels. The use of educational resources can be enhanced through online tools, or through videos, animations, music and games that can enhance text. Translations which can assist parents and others who help learners can also be easily and cheaply made available online.

Adaptability suggests that educational resources should be available online at least in addition to any other means being used. Since the ways in which knowledge is formulated, debated and communicated have changed profoundly as a result of the internet, to deny students an opportunity to work with educational resources online is to refuse them the opportunity to acquire the skills and capabilities they require for acquisition of further knowledge.

Availability, accessibility, acceptability and adaptability could each be increased through making educational resources available online in addition to any other means that are being used. There is, however, one barrier. It is not technological, pedagogical or financial – instead it is legal. The current procurement practice in South Africa awards a statutory monopoly to control the use and dissemination of publicly funded educational resources to publishers. The state thus precludes itself from increasing the availability, accessibility, adaptability and acceptability of taxpayer-funded educational resources.

4.2.3. Current gaps in providing educational resources online to learners in South Africa

Copyright

While South African schools and their learners must be supplied with paper educational resources such as workbooks and textbooks, we argue that the same educational resources must be available as both paper books and on internet-enabled devices. That is not possible under current textbook procurement policies which give control over state-funded textbooks to publishing companies. Despite the power that the state has in the procurement process, the current government permits the publishers a statutory monopoly by default.

Copyright tends to be vested in the authors and illustrators of textbooks and other educational resources by operation of law. However, publishers use their market power to require that copyright be awarded to them. Although the South African government could specify that copyright is transferred to it as a condition of award of each textbook contract, it currently neglects to do so. One consequence is that the government has given up the power to decide by which technological means educational resources will be

made available. Another is that publishers retain legal control over re-use of the resources, and learners and teachers in state schools can use the resources only with the permission of publishers or within the contested borders of narrow exceptions. This does not seem to be the result of deliberate policy so much as a lack of attention to procurement policy. It is one example of the way in which policies and practices that developed before the emergence of the internet may limit the exercise of economic, social and cultural rights through the internet.

Take-downs

South African legislation offers a shield from liability to ISPs that host content, but only if the ISP promptly takes down content when it receives a complaint.⁴¹ Complaints are not confined to copyright; they may have any legal basis or indeed none, since they are never adjudicated by an independent authority. There is no exception to the take-down rules for educational resources or educational uses. Thus anyone, including educators employed by the state, who uses copyright material under a lawful exception (such as for educational purposes) might have it summarily removed by an ISP based on a complaint of alleged infringement without having the validity of the use under the exception assessed. This effectively eliminates copyright exceptions on the internet.

Technical protection measures

The same legislation that shields ISPs from liability, although not enacted to prevent the circumvention of technical protection methods (TPMs), effectively does so. TPMs are technical measures that are used by either the producer of an educational resource or similar product or by an intermediary to control the use of the product. For example, a TPM imposed on a digital textbook might technically block copying a few lines from the book although that is permitted by copyright law. There are no explicit exceptions for educational resources or educational uses.⁴²

Censorship

During 2015 the Film and Publication Board (FPB) published a document entitled Draft Online Regulation Policy. The document claimed that the FPB has the power to regulate all internet communications in South Africa. The draft policy would require anyone who intended to distribute any film or game or "certain kinds of publication" in South Africa by making it available on the internet to first register with the FPB. Almost all communications on the World Wide Web would require pre-approval or a commitment to self policing.⁴³ The FPB planned to enter into agreements which would allow some distributors to selfpolice. Such distributors would be required to pay a substantial fee. The FPB reported that it was close to agreement with major distributors of content and games, such as Apple.⁴⁴

⁴¹Rens, A. (2015). South Africa, Censorship on Demand: Failure of Due Process in ISP Liability and TakeDown Procedures. In N. Rizk, C. A. de Souza & P. Parakesh (Eds.), *Global Censorship and Access to Knowledge*. International Case Studies, Information Society Project, Yale Law School, 65-83.

⁴²Professor Tana Pistorius in an analysis of the relevant provisions of the Electronic Communications and Transactions Act 2002 found that section 86 of the Act is "in essence, an anti-circumvention prohibition." This is a criminal provision and it may be possible to negate the element of intention by demonstrating that use is putatively lawful. The effect is to prevent the appropriate exercise of educational exceptions. See Pistorius, T. (2006). Developing countries and copyright in the information age – the functional equivalent implementation of the WCT. *Potchefstroom Electronic Law Journal, 9*(2), 1-21.

⁴³Right2Know Campaign. (2015, 10 March). Stop the Film and Publications Board's attempt to censor the Internet! www.r2k.org.za/2015/03/10/statement-stop-the-film-and-publications-boards-attempt-to-censor-the-internet

⁴⁴Film and Publication Board. (2013, 26 March). Press Release. www.fpb.org.za/media-centre-fpb/press-release/113film-publication-board-presents-5-year-strategic-plan-to-parliament

The policy would require every person sharing an educational video, an educational game or other educational publications to pay a fee, submit the video, game or publication to the FPB, and then wait for the FPB to give permission before sharing it. If a student made a video that explains an educational concept to her peers, she would have to follow the arduous FPB procedure to share it with her peers using the internet or risk criminal prosecution. How this attempt at censorship was opposed by civil society will be discussed in the next section.

Infrastructure: Failures in telecommunications and electricity policy

As pointed out earlier, statistics suggest a rapid trend in the take-up of new technologies in South Africa. However, bottlenecks and inequality in the provision of infrastructure limit internet access for the majority of the population. Information and communications technology (ICT) access in South Africa has been overpriced by global standards due to regulatory failure. Bad policy has led to failures in the roll-out of ICTs as much as poor implementation of policy.⁴⁵ The cost of both hardware and software remains high. At the same time, failure by the state to invest in energy infrastructure has resulted in the chronic undersupply of power.⁴⁶ In the current global knowledge society, neither economic development nor the realisation of rights can take place without appropriate policies that enable widespread access to both affordable electricity and ICTs.⁴⁷

4.3. Demands from civil society and rights holders

Demands from civil society and rights holders for the protection and fulfilment of the right to educational resources have come from the open educational resources (OER) movement, the access to knowledge (A2K) movement, the equal education for all movement, as well as learners themselves.

The OER movement includes activists, academics and entrepreneurs who want to realise the potential of educational resources that may be lawfully shared and remixed. Most of the effort of the OER movement has been directed at demonstrating this potential by creating resources that may be shared and remixed. The most succinct way to describe the movement is in the words of the "Cape Town Open Education Declaration: Unlocking the promise of open educational resources".⁴⁸ The declaration states that "everyone should have the freedom to use, customize, improve and redistribute educational resources without constraint." According to the declaration, an educational resource is open when it can be "freely shared through open licences which facilitate use, revision, translation, improvement and sharing by anyone." The declaration does more than point to the potential of open educational resources to increase access, by demanding that "taxpayer-funded educational resources should be open educational resources." While the declaration and meeting which produced it represented people from

⁴⁵Cloete, N., & Alison Gillwald, A. (2014). Op. cit.

⁴⁶"Over the past 20 years South Africa has not made significant investments in the energy sector." Department of Energy. (2012). *Revised Strategic Plan 2011/12 - 2015/16.*

⁴⁷Cloete, N., & Gillwald, A. (2014). Op. cit.

⁴⁸www.capetowndeclaration.org/ The author participated in the meeting that drew up the declaration and co-drafted portions of the text.

many countries, it is also representative of the OER movement in South Africa.⁴⁹ However, OER activities and particularly advocacy in South Africa have diminished since the declaration.⁵⁰

Distinct from but allied to the OER movement is the A2K movement.⁵¹ This movement produced a series of critiques of South African copyright law as well as a series of civil society proposals for changes to the South African Copyright Act. Those which include specific proposals for copyright exceptions to enable the use of knowledge resources for education are set out in Table 2.

Date	Document	Organisation(s)	In response to
September 2010	Report on Fundamental Rights and Global Copyright Legislative Best Practice for Access to Knowledge in South Africa*	APC	APC initiative
October 2013	Submission on the Draft Policy on Intellectual Property of South Africa by the Association for Progressive Communications on behalf of the Access to Knowledge Civil Society Coalition*	South African National Council for the Blind, APC	Draft policy on IP published by Department of Trade and Industry
October 2013	Legal Academics Comments on Draft National Policy on Intellectual Property of South Africa 2013*	Legal academics from the University of Cape Town and the University of KwaZulu Natal	Draft policy on IP published by Department of Trade and Industry
March 2015	Draft Provisions for Amendment of the 1978 Copyright Act*	АРС	APC initiative
September	Joint Academic Comments on the	Legal academics from	Draft Copyright

 Table 2. Civil society proposals for changes to the South African Copyright Act

⁴⁹At the time of the Cape Town Declaration the Shuttleworth Foundation, Creative Commons South Africa, Centre for Educational Technology, University of Cape Town and Freecourseware, University of the Western Cape were engaged in OER advocacy. Most of these have ceased OER advocacy.

⁵⁰For example the Shuttleworth Foundation was the first funder of the project that became Siyavula, ran the Go Open Source campaign to introduce open licensed software to schools and funded other OER initiatives, and continues to fund OER initiatives but no longer with an emphasis on South Africa.

⁵¹For a discussion of A2K in South Africa, see Armstrong, C. & and Schonwetter, T. (2015), Current African Intersections between Intellectual Property Rights and Knowledge Access. *African Journal of Information and Communuications* 16, 3-15

2015	[Draft] South African Copyright	UCT, UNISA, American	Amendment Bill, 2015
	Amendment Bill, 2015*	University, Duke	opened for comments
		University, Georgetown	by the Department of
		University	Trade and Industry

*Either drafted or co-drafted by the author.

South African copyright law has not yet been changed, so the impact of these efforts is difficult to gauge.

These efforts to reform South African copyright law are closely allied to the global A2K movement. The A2K movement includes efforts by developing country states to introduce minimum exceptions and limitations into the global copyright regime at the World Intellectual Property Organisation (WIPO).

The FPB attempt to introduce a pre-publication censorship regime in South Africa in 2015 was resisted by the Right2Know Campaign.⁵² The campaign has advocated on many related issues, most prominently on the proposed "secrecy bill", which sought to define and protect state information in a way that impacted negatively on transparency and accountability. The result of the campaign's lobbying against the FPB's draft policy was an indefinite suspension of the effort.

The publication of draft amendments to the legislation requiring take-down on complaint offered an opportunity, in December 2012, for APC to recommend a preferable system. The APC proposal would enable someone who had provided content to argue the legitimacy of doing so, and provide for judicial resolution of unresolved disputes.⁵³ The process to amend the legislation appears stuck. Censorship, ISP liability and copyright reform all affect the right to education, yet education is often not acknowledged in these law-making and policy discussions.

The "equal education for all" movement includes Basic Education for All, Section 27 and allied actors. Basic Education for All have successfully enforced the right to educational resources in court (discussed above), based in part on the right to education. These cases are aimed at ensuring that some learners, particularly black, rural, poor learners, are not deprived of the minimum necessities for a basic education, including textbooks and other resources. Section 27 is a public interest legal firm that assists poor people in enforcing socioeconomic rights to education, food, housing and health care in South Africa. Finally, learners themselves have taken to the street to protest against the denial of their right to education.⁵⁴

 $^{^{52}} www.r2k. org. za/2015/03/10/statement-stop-the-film-and-publications-boards-attempt-to-censor-the-internet to the statement of the sta$

⁵³Rens, A. (2012). *Section 77: Service Provider Liability and Take Down Procedures.* Johannesburg: APC. https://www.apc.org/en/system/files/Submission_on_section_77_byAndrewRens.pdf; see also: Comninos, A. (2012). Intermediary liability: New developments in South Africa. *APCNews.* https://www.apc.org/en/news/intermediaryliability-new-developments-south-afri

⁵⁴For example, a learner, parent and teacher march to protest failure to deliver textbooks was held in Giyani on 21 November 2015. See: section27.org.za/2015/11/textbooksmatter-campaign-launched

4.4. Other actors and influences

Government

Despite decades of efforts to provide education through conventional offline means, many people in South Africa do not enjoy the right to education as they should. During the same time period access to the internet has grown significantly although unevenly. At the same time some parts of the state educational system are moving towards mass adoption of digital technology as the primary means for providing educational resources.

The agendas of internet mega-corporations

In January 2012 Apple announced that it intended to "re-invent the textbook".⁵⁵ At the time Apple was the most heavily capitalised company in the world with a valuation of over USD 559 billion.⁵⁶ Steve Jobs reportedly viewed education as an eight-billion-dollar industry ripe for disruption.⁵⁷ The term "disrupt" used by Jobs is frequently used by multinational technology companies in a positive way to refer to the complete re-organisation of a sector, preferably by that company. Those affected may not take the same view of disruption. Apple produced not only new textbooks but a proprietary format and programme for creating textbooks. Textbooks produced using these tools are only available through the Apple Play "store" and often only accessible on Apple devices. Apple thus controls the entire value chain for these textbooks.

Google also offers educational software, content and services. In December 2015 a complaint to the United States Federal Trade Commission alleged that Google was collecting data on learners as young as seven.⁵⁸ In September 2015, when Facebook announced that it was building an education platform, civil society groups raised concerns about privacy.⁵⁹ At the time of the Facebook announcement the valuation for Google was USD 345.8 billion, while Facebook's was USD 183.9 billion, making Google the fourth and Facebook the 29th most capitalised corporations in the world.⁶⁰ These corporations are thus likely to exert considerable influence on the role that the internet plays in education and provision of educational resources in the future.

South African educational policy and legislation do not address how educational services can offer personalised learning while still maintaining appropriate privacy for students. This is only one example of the kinds of challenges that will follow from several of the largest corporations in the world seeking to disrupt education and to control the technologies used to deliver education. Developing countries such as South Africa are ill prepared to meet the resulting regulatory challenges.

⁵⁵Apple. (2012, 19 January). Apple Reinvents Textbooks with iBooks 2 for iPad. *Apple Press Info*. https://www.apple.com/pr/library/2012/01/19Apple-Reinvents-Textbooks-with-iBooks-2-for-iPad.html

⁵⁶Dullforce, A. (2012, 19 July). Global 500 2012. *Financial Times.* www.ft.com/intl/cms/s/0/e9d0412e-ca82-11e1-89f8-00144feabdc0.html

⁵⁷Zee News. (2012, 19 January). Apple Rolls out Digital Textbook Service iBooks 2. *Zee News*. zeenews.india.com/business/news/technology/apple-rolls-out-digital-textbook-service-ibooks-2_37359.html

⁵⁸Gillula, J. (2015, 2 December). Google's Student Tracking Isn't Limited to Chrome Sync *Electronic Frontier Foundation*. https://www.eff.org/deeplinks/2015/12/googles-student-tracking-isnt-limited-chrome-sync

⁵⁹Goel, V., & Rich, M. (2015, 3 September). Facebook Takes a Step Into Education Software. *The New York Times*. www.nytimes.com/2015/09/04/technology/facebook-education-initiative-aims-to-help-children-learn-at-their-own-pace.html

⁶⁰Dullforce, A. (2012, 19 July). Global 500 2012. *Financial Times.* www.ft.com/intl/cms/s/2/a352a706-16a0-11e5-b07f-00144feabdc0.html

4.5. Possible nodes of engagement

There are a number of possible nodes of engagement for South African civil society where the right to educational resources through the internet may be developed both in South Africa and internationally. A number of them pose challenges for the internet rights activist – however, they represent a starting point, a "way in" where expertise can be drawn on and old advocacy imperatives potentially reshaped through the lens of economic, social and cultural rights and the internet.

South Africa

In South Africa potential nodes include advocating for copyright reform, working with the equal education for all movement, OER advocacy, and pushing for appropriate exceptions for education in internet policy.

The Copyright Act amendment process offers a potentially critical node of engagement. However, the timing of this process is uncertain. There is also little evidence to suggest that engagement in copyright reform has informed government efforts to date. All of the engagement has been with the Department of Trade and Industry. It may be that engagement with the parliamentary process will inform copyright legislation. Potential advocacy partners in this effort are the equal education for all and OER movements, as well as the Creative Commons network (see below).

Engagement with equal education for all may be especially useful as this movement, amongst other things, has critiqued the introduction of tablets in some provinces, raising issues of equality. It is an energetic and vital force in advocacy around the right to education.

OER practitioners in South Africa do not currently make policy demands. While OER practitioners continue to create resources for education, there are opportunities for fresh actors to engage in OER advocacy.⁶¹ A key demand in this context is for all publicly funded educational resources to be published under open licences.

The currently stalled process to reform the Electronic Communications and Transactions Act may provide an opportunity to seek exceptions to take-down rules and anti-circumvention for education. However, this would work only if there is movement to amend the legislation. Internet regulation designed to facilitate the flow of information appears to be a very low policy priority for the current government.⁶²

International

Internationally, institutions include UNESCO and WIPO, the Creative Commons network, and organisations such as Commonwealth of Learning and Mozilla.

UNESCO proclaimed itself the champion of open educational resources in 2012 in the Paris OER Declaration.⁶³ However, UNESCO has not yet advocated that taxpayer-funded resources should be open. UNESCO could be a node for assessing the extent to which the adoption of open educational resources fulfils and is required by the right to education.

At WIPO, developing countries have set out to negotiate international minimum exceptions and limitations to copyright for visually impaired people, for libraries and for education. On 28 June 2013 the

⁶²Cloete, N., & Gillwald, A. (2014). Op. cit.

⁶¹Gray, E. (2016). Paradoxical Ecologies: Access to learning resources in South African post-apartheid higher education. In J. Karaganis (Ed.), *Ecology of Access*. Unpublished report on file with author.

⁶³UNESCO (2012). Paris OER Declaration. Adopted by the World Open Educational Resources Congress, UNESCO, Paris, France, 20-22 June.

Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled was concluded. However, since then there has been limited progress on exceptions for libraries. There has been no progress on exceptions for education, although it remains on the agenda of the WIPO Standing Committee on Copyright and Related Rights (SCCR).⁶⁴ Visually impaired persons and librarians have had organised representatives with observer status at WIPO for decades. There is no equivalent organised representation for education at WIPO. One form of engagement could be helping convene stakeholders not yet engaged with the SCCR.

Creative Commons is an international network of national affiliates run by volunteers and supported by Creative Commons Corporation. Its national affiliates engage in open education resource advocacy including in South Africa.⁶⁵ Creative Commons could be encouraged to link OER advocacy to the right to education.

Commonwealth of Learning is an organisation associated with the Commonwealth of Nations. It engages with national education authorities in Commonwealth countries. Commonwealth of Learning has encouraged and enabled the creation and use of open educational resources. Commonwealth of Learning could provide expertise to assist policy makers to create OER-friendly policies.

The non-profit wing of Mozilla is engaged in multiple activities that educate people to use technology to assert their rights. People are better able to protect their privacy if they can manage encryption for themselves. People are better able to control their own education if they have freedom to remix educational resources.⁶⁶

5. Conclusion

South African legislation and policy fail to protect the right to educational resources on the internet. This does not seem to be a deliberate choice by policy makers. Although internet access has increased dramatically in South Africa over the last few years, a substantial portion of the population does not have internet access and is unlikely to get it for several years. Regulatory failure has prevented the development of a competitive market for ICTs in South Africa. Similarly, failure to reform intellectual property laws raises the cost of hardware and software. The comparatively high cost of internet access is thus the direct result of policy and implementation failures by the government.

At the same time some parts of the state educational system are moving towards mass adoption of digital technology as the primary means for providing educational resources. Therefore the right to education and to educational resources requires government policies and action that are effective both online and offline. This can only happen if the government does not hand effective control over taxpayer-funded resources to corporations through permitting publishers to license educational resources as "all rights reserved". Procurement policy should be changed so that all taxpayer-funded educational resources are under open licences such as Creative Commons Attribution.

⁶⁴Saez, C. (2015, 17 December). Exceptions To Copyright To Remain On Agenda Of WIPO Copyright Committee. *Intellectual Property Watch*. www.ip-watch.org/2015/12/17/exceptions-to-copyright-to-remain-on-agenda-of-wipocopyright-committee

⁶⁵Creative Commons South Africa recently co-hosted an event on open textbooks for Africa. See: www.sahistory.org.za/events/open-textbooks-africa-summit

⁶⁶For example, Mozilla offers curricula that include "Web Literacy Basics" and "Protect your Data". See: https://teach.mozilla.org/activities

Government efforts to use the internet for educational resources take place in a global environment which includes many of the most highly capitalised multinational corporations intent on re-inventing educational resources. Civil society organisations concerned with education and thus with the supply of educational resources in South Africa cannot ignore the internet. Failure to develop a vision of education that makes use of the opportunities presented by the internet due to mistaken claims that it is a luxury or unaffordable technology simply cede control of the future of educational resources to private actors in the global North. Nor will delay in developing appropriate policy until South Africa has 100% internet penetration insulate South Africa from global developments, not least of which is the increasing importance of the internet to national economies.

It is likely that particular technologies appropriately deployed in particular contexts enhance education while other technologies inappropriately deployed will fail to improve, or may even hamper, education. While this seems to be so obvious as not to need stating, many contemporary media reports and even some academic analysis or scientific authorities too readily either condemn or praise deployment of any internet-related technologies in all contexts. What is apparent is that a more nuanced approach is necessary, where digital technologies aid, supplement and reinforce appropriate pedagogical methods in specific contexts.

6. Key provisions on the right to education

6.1. International law

International Covenant on Economic, Social and Cultural Rights

Article 2

1. Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures.

2. The States Parties to the present Covenant undertake to guarantee that the rights enunciated in the present Covenant will be exercised without discrimination of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.

Article 13

1. The States Parties to the present Covenant recognize the right of everyone to education. They agree that education shall be directed to the full development of the human personality and the sense of its dignity, and shall strengthen the respect for human rights and fundamental freedoms. They further agree that education shall enable all persons to participate effectively in a free society, promote understanding, tolerance and friendship among all nations and all racial, ethnic or religious groups, and further the activities of the United Nations for the maintenance of peace.

2. The States Parties to the present Covenant recognize that, with a view to achieving the full realization of this right:

- a. Primary education shall be compulsory and available free to all;
- Secondary education in its different forms, including technical and vocational secondary education, shall be made generally available and accessible to all by every appropriate means, and in particular by the progressive introduction of free education;
- c. Higher education shall be made equally accessible to all, on the basis of capacity, by every appropriate means, and in particular by the progressive introduction of free education;
- d. Fundamental education shall be encouraged or intensified as far as possible for those persons who have not received or completed the whole period of their primary education;
- e. The development of a system of schools at all levels shall be actively pursued, an adequate fellowship system shall be established, and the material conditions of teaching staff shall be continuously improved.

3. The States Parties to the present Covenant undertake to have respect for the liberty of parents and, when applicable, legal guardians to choose for their children schools, other than those established by the public authorities, which conform to such minimum educational standards as may be laid down or approved by the State and to ensure the religious and moral education of their children in conformity with their own convictions.

4. No part of this article shall be construed so as to interfere with the liberty of individuals and bodies to establish and direct educational institutions, subject always to the observance of the principles set forth in paragraph 1 of this article and to the requirement that the education given in such institutions shall conform to such minimum standards as may be laid down by the State.

Declaration under article 13 (2) (a) by South Africa on accession to the ICESCR

"The Govenment of the Republic of South Africa will give progressive effect to the right to education, as provided for in Article 13 (2) (a) and Article 14, within the framework of its National Education Policy and available resources."

Article 14

Each State Party to the present Covenant which, at the time of becoming a Party, has not been able to secure in its metropolitan territory or other territories under its jurisdiction compulsory primary education, free of charge, undertakes, within two years, to work out and adopt a detailed plan of action for the progressive implementation, within a reasonable number of years, to be fixed in the plan, of the principle of compulsory education free of charge for all.

Article 15

- 1. The States Parties to the present Covenant recognize the right of everyone:
 - a. To take part in cultural life;
 - b. To enjoy the benefits of scientific progress and its applications;
 - c. To benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.

2. The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for the conservation, the development and the diffusion of science and culture.

3. The States Parties to the present Covenant undertake to respect the freedom indispensable for scientific research and creative activity.

4. The States Parties to the present Covenant recognize the benefits to be derived from the encouragement and development of international contacts and co-operation in the scientific and cultural fields.

African Charter of Human and Peoples' Rights

Article 17(a)

Every individual shall have the right to education.

Article 13(3)

Every individual shall have the right of access to public property and services in strict equality of all persons before the law.

Article 21(5)

State Parties to the present Charter shall undertake to eliminate all forms of foreign exploitation particularly that practised by international monopolies so as to enable their peoples to fully benefit from the advantages derived from their national resources.

Article 25

State Parties to the present Charter shall have the duty to promote and ensure through teaching, education and publication, the respect of the rights and freedoms contained in the present Charter and to see to it that these freedoms and rights as well as corresponding obligations and duties are understood.

6.2. National law

Bill of Rights, Constitution of 1996

Section 29. Education

1. Everyone has the right

- a. to a basic education, including adult basic education; and
- b. to further education, which the state, through reasonable measures, must make progressively available and accessible.

2. Everyone has the right to receive education in the official language or languages of their choice in public educational institutions where that education is reasonably practicable. In order to ensure the effective access to, and implementation of, this right, the state must consider all reasonable educational alternatives, including single medium institutions, taking into account

- a. equity;
- b. practicability; and
- c. the need to redress the results of past racially discriminatory laws and practices.

3. Everyone has the right to establish and maintain, at their own expense, independent educational institutions that

- a. do not discriminate on the basis of race;
- b. are registered with the state; and
- c. maintain standards that are not inferior to standards at comparable public educational institutions.

4. Subsection (3) does not preclude state subsidies for independent educational institutions.