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A New Dawn

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Volume 1

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Research Justification

The Brazil, Russia, India China and South Africa (BRICS) organisation is a significant player in the international arena. Thus, it is important for South Africa as a member of BRICS to explore the implications of the external and internal influences of BRICS. This includes comprehensive understanding of the international and national involvement of BRICS in education provision and introducing discovered influences in the South African educational planning. The size of BRICS as an international player, in different areas and on different levels, necessitates the research of its functioning and, in this case, the role of BRICS regarding education provisioning. Therefore, this research and analysis of the contribution of BRICS in education provision are an important addition to the field of effective education.

In July 2017, ministers from the BRICS countries adapted a *Beijing Declaration on Education*. The declaration focuses on ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. The declaration emphasises the importance of learning from experience of other countries in improving and promoting the development of education through international exchanges. The declaration also encourages member states to develop projects that are of common interests to all member states. Through the preliminary literature reviews, we noticed that current studies often are quantitative in nature and lack comparative qualitative exploration about education development in BRICS countries.

For this reason this book, entitled *A New Dawn*, featuring in the book series *BRICS Education*, will contribute to the flourishing of quality education in South Africa and all BRICS nations. The book will also aim to encourage researchers to join efforts with other researchers of the five member states in order to learn from each other and to address common challenges. To that end, this research will generate scientific knowledge meant to maximise the readers, understanding of the current realities of the education aims at the national (each member state) and collective (BRICS organisation) level. The authors of the book are interested in comparing the educational aims across the BRICS countries and explore how successfully these aims are being implemented on the ground. Through the discovering of similarities and differences in the educational aims of the five member states and the educational objectives of the BRICS organisation, the readers of the book will be able to identify best practices that will allow member states to fulfil the education aims of the BRICS organisation at large. The authors anticipate that the knowledge generated through this research will result in gaining valuable insights into how to advance realisation of education aims in each BRICS member state as well as how to share information across countries to reach education aims of BRICS organisation. There is a need to understand current similarities and differences between the aims of individual countries and the challenges associated with implementation of these aims in practice. Lessons that will be learnt are meant to be presented in the form of recommendations and shared across the BRICS countries.

This qualitative study will rely on the interpretivist paradigm. Such a paradigm is concerned with understanding the world as it is from subjective experiences of individuals and requires putting analysis into specific context (Reeves & Hedberg 2003). This study will investigate the BRICS education aims and through comparison explore best education practices in the member states that can assure quality education. In this regard, data will be collected and analysed by taking into consideration the respective contexts of each country. A literature review will provide background of the BRICS organisation as well as an overview of the educational system and education aims of the individual member states. Considering that the methods and sources should be chosen based on their ability to provide insights into the phenomena under investigation, data collection will include a document analysis.

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Abbreviations, Figures and Tables Appearing in the Text and Notes

List of Abbreviations

AICTE	All India Council for Technical Education
AIDS	Acquired Immune Deficiency Syndrome
ANA	Annual National Assessment
ASER	Annual Status of Education Report
BEA	BRICS Educational Aims
BEO	BRICS Educational Objectives
BNU	BRICS Network University
BRIC	Brazil, Russia, India, and China
BRICS	Brazil, Russia, India, China and South Africa
BTTC	BRICS Think Tank Council
CAPES	Coordination for Improvement of Higher Education Personnel
CCCCP	Central Committee of the Chinese Communist Party
CIC	Centre for International Cooperation
COOP	International Cooperation Alliance
DIRCO	Department of International Relations and Cooperation
EA	Educational Aims
EEU	Eurasian Economic Union
EFA	Education for All
EFAR	Education for All Review
EO	Educational Objectives
EU	European Union

FCTE	Federal Centre for Technological Education
FIEST	Federal Institute of Education, Science and Technology
FSES	Federal State Education Standards
GETI	Group for Economic and Trade Issues
GDP	Gross Domestic Product
GER	Global Education Report
HEI	Higher Education Institutions
HIV	Human Immunodeficiency Virus
HLPF	High-Level Political Forum on Sustainable Development
IMF	International Monetary Fund
INEP	Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira
JICA	Japanese International Cooperation Agency
LDB	Law of Directives and Bases
MDG	Millennium Development Goal
NAS	National Assessment Survey
NDB	New Development Bank
NGO	Non-governmental Organisations
NQF	National Qualifications Framework
OBE	Outcomes-based Education
OECD	Organisation for Economic Cooperation and Development
ORT	Society for Commercial and Agricultural Labour [<i>Obshestvo Remeslenofo zemledelcheskofo Truda</i>]
PartNIR	Partnership on New Industrial Revolution
PhD	Doctorate in Philosophy
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
PNAD	National Household Sample Survey

PRC	People's Republic of China
RAND	Research and Development
SAWHAR	South African Water History Archival Repository
SDG	Sustainable Development Goals
SEA	South African Educational Aims
TIMMS	Trends in International Mathematics and Science Study
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Emergency Fund
USSR	Union of Soviet Socialist Republics
WEF	World Economy Forum
WHO	World Health Organization
WORLD ORT	World Association for the Promotion of Skilled Trades
WTO	World Trade Organization
YASS	Yunnan Academy of Social Sciences

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Cooperation theory

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Keywords: Cooperation theory; International; Organisations; Game theory; Social dilemmas.

■ Introduction

International cooperation occurs between persons, universities, interest groups, organisations, countries and so forth for various reasons. The Brazil, Russia, India China and South Africa (BRICS) organisation is a relatively new international organisation that cooperates on many levels across various fields. The Brazil, Russia, India and China (BRIC) organisation, as an international cooperation organisation, was founded in Yekaterinburg, Russia, on 16 June 2009 (Russian Federation 2009). South Africa joined

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BRIC in 2010, and the organisation became known as 'BRICS' (BRICS5 2013a). The BRICS was founded on the principles of cooperation theory to enhance the interests of member states in various areas. Education cooperation was earmarked as one of the key cooperation areas for development. Following the fifth summit of the BRICS member states, held in Durban, South Africa, in 2013, the following BRICS education objectives were identified (BRICS5 2013b):

1. the strengthening of cooperation amongst BRICS universities
2. secondly, the establishment of partnerships and the exchange of knowledge concerning technical vocational education and training
3. thirdly, the transferability of qualifications amongst BRICS countries
4. lastly, the importance of cooperation with the United Nations Educational, Scientific and Cultural Organisation (UNESCO) to accelerate progress for Education for All (EFA).

In this chapter, the educational objectives of the BRICS organisation will be assessed against the educational aims of the individual member states. The cooperation theory will also be described.

■ Theoretical framework

According to Asher (2013:3) and Ravitch and Rikken (2017:4), a theoretical framework consists of concepts and theories, and includes definitions and references to relevant scholarly literature and existing theory that are applicable to the research. The theoretical framework must demonstrate an understanding of those theories and concepts that are relevant to the topic of one's research paper and that relate to the broader areas of knowledge being considered. The concepts relevant to this study are 'organisation', 'international', 'BRICS member states', 'BRICS educational aims', 'comparative method', 'cooperation', 'social dilemma' and 'game theory'.

■ BRICS

The term 'BRICS' is the abbreviation for the organisation consisting of five major emerging national economies, namely, Brazil, Russia, India, China and South Africa. The BRICS group consists of developing or newly industrialised countries. They are characterised by their large and fast-growing economies, which have a significant impact on local and global interests. All member states of BRICS are also Group of Twenty (G20) member states. The member states of BRICS are equal partners and can participate democratically, without prejudice to rights, in various meetings and discussions of the organisation (BRICS5 2013b; De Beer 2017).

In general, the BRICS organisation cooperates in areas of international security, international peace, advancement of BRICS interest in international arena, reform of international financial systems, trade and economic cooperation between BRICS member states, social cooperation, humanitarian cooperation, international trade, international development, agricultural cooperation, energy, poverty relieve, climate change, terrorism and education. The educational aims and objectives of BRICS have evolved since the first summit, and they focus on higher education, technical education, general education and education policy strategies. These are further discussed in Chapters 5–10 of this book.

■ International

The term 'International' is a combination of two words 'inter' and 'national'. The prefix 'inter' originates from Latin, and the *Collins English Dictionary* (2016:n.p.) defines 'inter' as 'between or among and together', or 'mutual and interdependent'. The *Oxford English Dictionary* (2016:n.p.) defines 'national' as relating to, or a characteristic of, a nation, and it is common to a specific nation. The term 'international' was first introduced by the English philosopher, economist and theoretical jurist Jeremy Bentham (IEP 2019). He used the term 'international' in his description of international law, describing the body of legal rules, norms and standards that apply

between nations and other entities that are legally recognised amongst them. Therefore, the term 'International' dictates the relationship that exists between different nations and explains these relationships between different nations.

■ Organisations

Handy (2005:15) and Scott (2008:5) characterise an organisation as an entity, such as an institution or association, that has specific aims and objectives, comprising multiple people. Thus, an organisation is a group or groups of people working together for a common goal in a specific time frame and has a predetermined monetary value.

'An organisation is a framework within which human activities are directed and coordinated' to achieve an agreed core goal (Basson, Van der Westhuizen & Niemann 1995:583). Theron (2013:81) confirms this in his definition of an organisation, stating that it is a formal structure in which people are in a specific relationship with one another with the aim of achieving particular goals. Pharos (2019) simply defines organisation as the way something is organised or a group acting as an organised body. An organisation can be defined as a group or groups of people, structured hierarchically, who work together to achieve specific goals within a specific time and budget. Theron (2013:6) describes the characteristics of an organisation as:

- It has a specific composition and structure.
- It consists of more than one person with prescribed and differentiated tasks.
- It is constituted to achieve particular goals and objectives.
- It is managed with the aim of achieving goals.
- It is exposed to external influences.
- It is characterised by coordinated activities.
- It is characterised by collective activities.

BRICS adheres to the above definition of an organisation. It consists of government officials and other role-players, such

as academics, who cooperate to achieve the goals and objectives set by the BRICS organisation. Our focus in this book will be on the educational aims and objectives of BRICS measured against the individual educational aims of the member states (Brazil, Russia, India, China and South Africa).

■ International organisations and regimes

In Chapter 2 of this book, some of the major international organisations, such as the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the United Nations (UN) and the Association for the Promotion of Skilled Trades (World ORT – Russian: *Общество Ремесленного Труда*, *Obchestvo Remeslenogo* [pronounced: Remeslenava] *Truda*), are discussed, their aims and objectives are unpacked and their successes are evaluated. The aims of UNESCO (2018) are:

[T]o contribute to peace and security in the world by promoting collaboration among nations through education, science, culture and communication in order to further universal respect for justice, the rule of law and the human rights and fundamental freedoms that are affirmed for the peoples of the world, without distinction of race, sex, language or religion. (p. 6)

The World ORT is a non-profit Jewish organisation promoting education and training in communities across the world. Lastly, the UN is focused on (Wiles 2019):

[M]aintaining worldwide peace and security, developing relations among nations, fostering cooperation between nations in order to solve economic, social, cultural or humanitarian international problems and providing a forum for bringing countries together to meet the UN's purposes and goals. (n.p.)

Allison and Zelikow (1999) highlight the inner working of regimes and international organisations when these have to work together in situations of peace and conflict. They mention three lenses through which analysts can examine events by measuring the

Cuban missile crisis, namely, the rational, the behavioural and the governmental theory models. These models can be used to explain how decisions are being made by nations, international regimes or international organisations. The following three questions, applied to different models, are posed:

- Why did the Union of Soviet Socialist Republics (USSR) place missiles in Cuba?
- Why did the United States of America (USA) answer with a blockade?
- Why did the USSR withdraw the missiles?

The first theory sees governments as being the primary actors that examine a set of goals, evaluate them according to their utility and then pick the one with the highest reward. The second theory states that when governments face a crisis, government leaders do not look at it but break it down and designate it according to pre-established organisational lines. Instead of evaluating all possible courses of action to see which one is most likely to work, leaders settle on the first proposal that adequately addresses the issue. Organisations follow set procedures and existing plan when making decisions. The third theory is based on politics. While statesmen do not like to admit that they indulge in politics to get things done, especially in high-stakes situations such as the Cuban missile crisis, they nonetheless do.

Bohning (1999) summarises the functions of an international organisation as, firstly, an international organisation collects and studies relevant information; then it sets an acceptable norm relating to the functioning of the organisation; cooperation must be cherished during meetings; and technical cooperation activities must be advanced. *Encyclopaedia Britannica* (2019) refers to the following flared functions of international organisations: they (e.g. the World Health Organization [WHO]) render services and assistance; they collect information and monitor international tendencies (e.g. the United Nation Education Programme); they (e.g. the UN) provide forums for negotiations; and they (e.g. the WHO) resolve disputes. The function and inner workings of an

international organisation are, therefore, complex and wide-reaching.

■ Cooperation

Cooperation can be defined as a process where different groups work together for a common goal and mutual benefit (*Oxford English Dictionary* 2016). Axelrod (2000:226) and Keohane (1985:226) believe that collaboration happens when role-players change their behaviour to the actual or expected preferences of others. Lindenfors (2017) explains cooperation as the process where groups of organisms work or act together for common, mutual or some underlying benefits.

Paulo (2014) describes international cooperation as the interactions between different countries that happen to achieve common goals where role-players' preferences are the same (in harmony) or different (in conflict). International cooperation is, therefore, the interaction of persons or groups of people from different nations in pursuit of a common goal or goals.

■ Cooperation theory

The cooperation theory perspective of neoliberal institutionalism is one of the most interesting and important developments in international cooperation theories in modern times (Axelrod 1984; Keohane 1984). According to Fearon (1998:1), cooperation theorists argue that different international issues, such as finance, arms control and the environment, have different strategic structures. These strategic structures have an extremely important impact on international cooperation and also on the nature of the specific problems that the countries concerned need to overcome in order to achieve results. The various strategic structures are traded through collaboration theories and models and include simple matrix games, such as Chicken, Deadlock, the Stag Game, the Money Game and Prisoner's Dilemma (Fearon 1998:270).

The game of Chicken is a game in which two drivers drive towards each other from opposite directions on a single-lane road (Sugden 2005). If both drivers swerve, it is a tie. If one driver swerves and the other driver goes straight on, there is a clear winner. If both drivers follow the original line, there could either be a stalemate or a fatal crash. The Deadlock computer game (Deadlock: Planetary Conquest) is an example of a game that is comparable to the BRICS organisation and its integrated structure (Accolade 1996). It consists of eight races (ChCh-t, Cyth, Humans, Maug, Re'Lu, Skirineen, TARTH and Uva Mosk), and each race is determined to capture the planet Gallius IV for its own purposes. The Stag Game by Jean-Jacques Rousseau (1755) depicts circumstances where two people go out on a hunt. Each hunter can separately hunt a stag or a rabbit. Each hunter has to pick his or her target without knowing the decision of the other. If either hunter hunts a stag, he or she should have the participation of the fellow hunter in order to succeed. A hunter can hunt a rabbit without the other hunter's cooperation; however, a rabbit is not worth as much as a stag. This can be applied similarly to social international participation, for example, worldwide concessions to atmospheric change. The prisoner's dilemma will be discussed in detail in the following section.

■ Game theory

The idea of a game mirroring the conflicts of the world is an old one (Poundstone 1992:37). One of the best examples of games imitating real-life situations is the war game *Kriegspiel*. *Kriegspiel* was developed in the 19th century by Georg Heinrich Rudolf Johann von Reisswitz (1794-1827) for the Prussian army to teach them battlefield tactics. Reisswitz's war game simulated war. This war game was played on a game map that represented the battlefield, and the troops and war machinery were represented by lifelike figurines. It was turn-based and played by two teams, each commanding an army of little figurines (Dannhauer 1874).

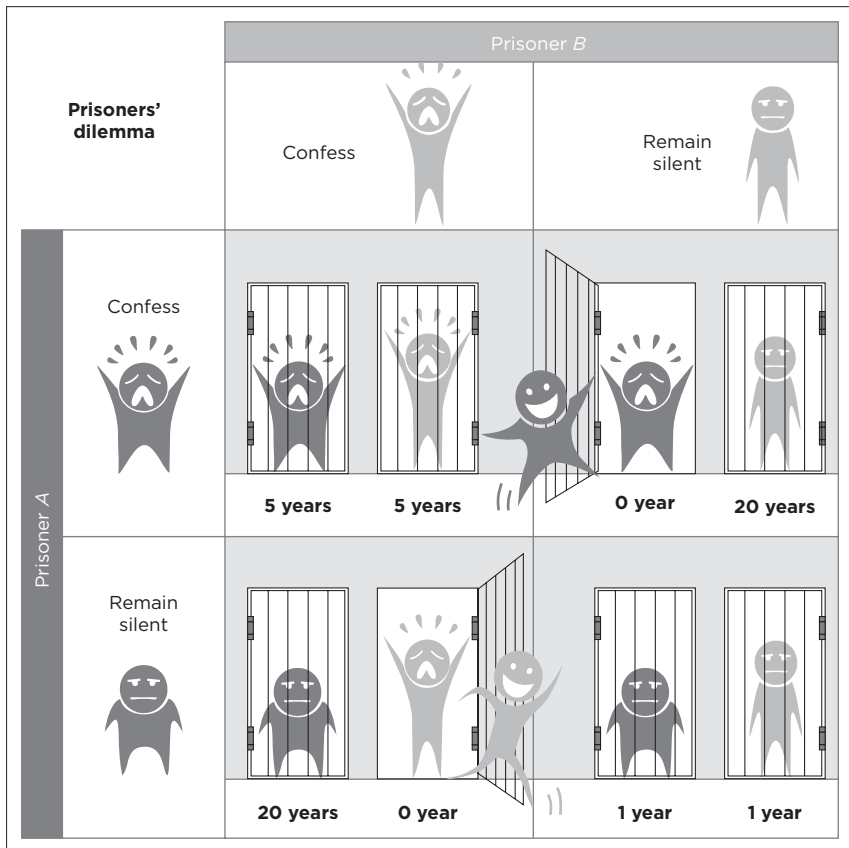
Before the rise of the mathematical game theory, Charles Waldegrave mentioned and discussed the first documented evidence of game theory in 1713 (Bellhouse 2007). Waldegrave provided a minimax mixed-strategy solution to a two-person version of the card game 'Le Her', where the problem is now known as the 'Waldegrave problem'. Only after John von Neumann's 'Theory of games of strategy' published in 1928 was game theory defined as a unique field of study. In 1950, Flood and Dresner undertook an experiment while working for the Research and Development Corporation (RAND Corporation). They pursued the study because of its possible applications to the global nuclear strategy (Flood 1951, 1952) and made the most influential discovery in the game theory. They devised a game that challenged part of the theoretical basis of game theory. Tucker (1950) gave the name 'prisoner's dilemma' to Flood and Dresner's model of cooperation and conflict, which resulted in the most well-known game-theoretic paradox (Flood & Dresner 1950).

Myerson (1991:1) defined the game theory as being the study of mathematical models of strategic interaction between rational decision-makers. The game theory applies to a wide range of behavioural relations and describes logical decision-making in humans, animals and computers. Therefore, the game theory studies participants' behaviour in different situations.

Poundstone (1992:1-8) discussed one of the most historical dilemmas in world history, namely, when the USSR dropped its first atomic bomb in Siberia in August 1949. This led to the nuclear arms race between the USA and the USSR. The possible outcomes of the nuclear arms race were analysed in detail. One country could destroy the other with the push of a button. This is an excellent example of choices two entities can make that could have different outcomes. The USA and the USSR can destroy each other, or they can choose not to push the nuclear red button. One of the nations can attack, while the other one does nothing. The nuclear dilemma is further highlighted by the prisoner's dilemma, which will be discussed next.

□ The prisoner's dilemma

The prisoner's dilemma implies that two completely rational individuals might not cooperate, even if it appears that it is in their best interest to do so. Merrill Flood and Melvin Dressler described it while they were working at the RAND Corporation in 1950. Tucker formalised the game and named it 'prisoner's dilemma'. Figure 1.1 visualises the prisoner's dilemma.



Source: Encyclopaedia Britannica (2010).

FIGURE 1.1: The prisoner's dilemma.

□ The two-person social dilemma

Flood and Dresner (1950) designed a game that is the simplest example of the two-person social dilemma. The options for decision-making for the participants are as follows:

- Mutual apostasy gives a small advantage to everyone.
- Mutual cooperation gives an average advantage to everyone.
- Unequal motion gives more advantage to one to the detriment of the other.

□ Tucker's game

Tucker (1950) developed a story to illustrate Flood and Dresner's (1950) game. In the story, two thieves are caught, but the police do not have enough evidence to find them guilty. The police separate the two and make the same offer to each:

- If Accused A (apostate) testifies against Accused B and Accused B (collaborator) does not betray his partner, then the apostate will be free and the collaborator will go to jail for 1 year.
- If both accused keep quiet and work together, then they will receive one month's imprisonment each.
- If one betrays the other, each will receive three months' imprisonment.

From the above examples of collaborative models and theories, the complexity of cooperation and social dilemmas between people in general, and countries and their strategic structures (e.g. BRICS in this study) in particular, is evident. Each country only works together if there is 'something' for the countries concerned to benefit from. Recent examples of collaboration between BRICS countries are the significant financial investment of China in the infrastructure development of Africa and the nuclear cooperation agreements between Russia and South Africa. Cooperation must, as in Tucker's game, lead to effective collaboration where a win-win situation is created.

Axelrod (2000) provides the following principles for effective collaboration:

- Avoid envy about the profits of the other country or person. This is not a win-or-lose cooperation agreement. The best strategy improves the outcome of both countries or persons.
- Be compliant. Start cooperation and do not be the first party to apostate.
- Be fair and avoid volatility.
- Avoid wilfulness. Forget about past mistakes.
- Be forgiving. Forgive the other country or person.

The magnitude of cooperation and collaboration within the BRICS organisation should be managed according to the above principles. Fairness and mutual respect without a win-or-lose outcome must be the key objectives. The relationships of the BRICS countries amongst themselves have an influence on the cooperation within the BRICS organisation. India has engaged in a long-standing conflict with China because of the 1962 Sino-Indian Border Conflict (Garver 2011:59). The India-Russia Intergovernmental Commission is the main body that conducts affairs at the governmental level between the two countries. India and Russia have had a long history of cooperation since the 1950s (Vojtech 2010). South Africa and Brazil are likely to continue struggling amidst internal strife and economic uncertainty, rather than emerging as influential international actors. Russia is a powerhouse and will continue to have its influence felt in the BRICS organisation. South Africa and Russia are busy with nuclear energy negotiations. Critique and internal political pressure have stalled the cooperation between the two countries. It has been claimed that the nuclear technology from Russia is not suitable for Africa and will be very expensive (Burke 2019). These examples of international historical cooperation and conflict situations must be factored in when the dynamic cooperation between the BRICS member states is considered.

■ Social dilemmas

According to Listverse (2007):

You are an inmate in a concentration camp. A sadistic guard is about to hang your son who tried to escape and wants you to pull the chair from underneath him. He says that if you don't, he will not only kill your son but some other innocent inmate as well. You don't have any doubt that he means what he says. What should you do? (n.p.)

The concentration camp moral quandary sets the tone for social dilemmas. Allison, Beggan and Midgley (1996:482) state that 'a social dilemma is a situation in which an individual gains from selfishness, unless everyone chooses the selfish alternative, in which case the whole group loses'. Examples of social dilemmas include over-fishing, immigration, poverty, crime, fair trade, nuclear and coal power, and environmental issues. The BRICS organisation also focuses on social dilemmas in areas of cooperation, which include agriculture, climate change, poverty relief, energy, humanitarian cooperation and terrorism.

Historically, the literature highlights three types of social dilemmas by using 'games' as metaphors for real-life social dilemmas (Dawes & Messick 2000:112; Kollock 1998:186). These include the prisoner's dilemma, the public goods dilemma and the commons dilemma. As described earlier, the prisoner's dilemma was developed in the 1950s. It is about two prisoners who are separately given a choice to either cooperate or to inform on their partner in crime. Working together and not informing on their partner have the best cooperative outcomes.

The public goods dilemma implies that all may benefit from a resource or 'good' irrespective of whether they have contributed to the good or not. The whole group can benefit if some of the members give something for the common good, but individuals benefit from free goods when many others contribute (Allison & Kerr 1994:691). Public goods can be rival if the consumption thereof by one user prevents the simultaneous consumption by other users. An example of rival goods is a pizza delivery

motorcycle. If one delivery person is busy delivering pizzas, the other delivery person cannot deliver his or her pizzas. But the goods (the delivery motorcycle) are available when the first person has delivered his or her pizza. Rival goods are not available for both persons to be used at the same time. Public goods are also goods that are non-rival and non-excludable (Weimer & Vining 2019:72). Public goods are considered to be non-rival if the cost of providing the goods is zero to an individual (Cornes & Sandler 1986:94). Examples of non-rival goods are radio broadcasting, the defence force, beautiful views, clean air and street lights. These non-rival goods can be enjoyed by all people simultaneously and are not dependent on others. Non-rival goods may benefit all regardless of whether they have contributed to the goods or not.

The commons dilemma is a decision game that utilises dilemmas connected with harvesting common-pool resources. The deforestation of the Amazon rainforest in Brazil is an example of a social commons dilemma where the resources are rapidly decreasing at an alarming rate. In 2012, the Amazon rainforest was only 87% of its original size, and if deforestation continues at this rate, it will be reduced by 40% in 2030 (Malhi et al. 2009). The tragedy of the commons dilemma is that the forest will be destroyed and will not have time to regrow, which will lead to a replenishing resource management dilemma. These three types of dilemmas accentuate the complex and difficult decisions to be made when individuals, countries and organisations have to cooperate to achieve specific common goals. The BRICS organisation will have to take note of the complexity of cooperating on such a large and dynamic scale.

■ The evolution of cooperation

As stated earlier, an organisation is a group or groups of people working together for a common goal in a specific time frame, which has a predetermined monetary value. Charles Darwin, in

his book *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (1859:3), explains evolution as the process where all species arise and develop through the natural selection of small, inherited variations that increase the individual's ability to compete, survive and reproduce. The BRICS organisation can be a metaphor for five species that are competing to survive and to reproduce. In Table 1.1, Novak's (2006:1) five rules for the evolution of cooperation are applied to the BRICS organisation to highlight the complexity of such an enormous organisation.

The level of cooperation in the BRICS organisation was measured against Nowak's five rules for the evolution of cooperation. In Table 1.1, the evolution of the BRICS organisation is highlighted with some examples.

TABLE 1.1: Novak's five rules for the evolution of cooperation.

Rule	Cooperation	BRICS
1. Kin selection	Natural selection can favour cooperation if the donor and the recipient of an altruistic act are genetic relatives (Hamilton 1964:4).	The BRICS members are all developing or newly industrialised countries, but they are distinguished by their large, fast-growing economies and significant influence on regional and global affairs. All five are G20 members (O'Neill 2001). They have genetic similarities.
2. Direct reciprocity	Repeated encounters between the same two individuals or groups. In every round, participants have a choice between cooperation and defection (Trivers 1971:36). This game-theoretic framework is the prisoner's dilemma (Fearon 1998).	The BRICS organisation has met 10 times since 2009. The encounters were based on agendas set out by the rotating member states. Each must decide how and on what grounds they will defect or cooperate. One of the dilemmas of BRICS is that it, on the one hand, seeks to promote some form of pluralism in the international arena and, on the other hand, does not seem to offer an alternative. In the case of financial institutions, they have caused a reform in the decision-making power of the traditional institutions but have not provided an alternative development policy (Juutinen 2017).

Table 1.1 continues on the next page →

TABLE 1.1 (Continues...): Novak’s five rules for the evolution of cooperation.

Rule	Cooperation	BRICS
3. Indirect reciprocity	Randomly chosen pairwise encounters where the same two individuals need not meet again (Novak & Sigmund 1998).	Not applicable to BRICS. BRICS encounters are planned and are not random.
4. Group selection	Selection acts not only on individuals but also on groups. A group of cooperators might be more successful than a group of defectors (Novak 2006).	See ‘kin selection’ above. Brazil, Russia, India, China and South Africa formed the BRICS organisation to be an alternative for existing world powers. The New Development Bank (NDB) is an example of BRICS members working together to set an alternative financial option for developing countries. ‘The New Development Bank was formed to support infrastructure and sustainable development efforts in BRICS and other underserved, emerging economies for faster development through innovation and cutting-edge technology. The bank will partner nations through capital and knowledge, achieving development goals with transparency and empathy and creating an equal opportunity for the development of all countries’ (NDB 2019:n.p.).
5. Evolutionary success	The success of the evolution of a group, species or individual.	The success stories of BRICS show the evolution of the cooperation between the member states: the establishment of the NDB with \$100bn reserves; the declaration of an open and inclusive multilateral trading system; agreements on environmental cooperation and a memorandum of understanding on a regional aviation partnership amongst the BRICS countries; and the establishment of a BRICS Women’s Forum, a vaccine centre to be based in South Africa and a tourism track to promote people-to-people cooperation. BRICS member states envision the establishment of BRICS iterations in the areas of culture, arts and sports (South African Government News Agency 2018).

Source: Novak (2006:1).
BRICS, Brazil, Russia, India, China and South Africa.

■ Research design and methodology

This qualitative study utilised an interpretivist paradigm. This 'paradigm is concerned with understanding the world, as it is, from the subjective experiences of individuals' and requires putting analysis into a specific context (Reeves & Hedberg 2003:32). This study investigated the BRICS educational objectives and, through comparison, explored best education practices in the member states that could ensure quality education. In this regard, data were collected and analysed taking into consideration the respective contexts of each country. The literature review provides the background of the BRICS organisation and an overview of the educational system and educational aims of the individual member states.

The methods and sources were selected based on the ability thereof to provide insight into the phenomenon under investigation. Data consisting of relevant policies, legislation and other governmental sources were collected.

The comparative method was applied to compare the educational objectives of the BRICS organisation with the educational aims of each individual member state. In comparative education, a variety of research methods can be employed, which is typical of social sciences (Wolhuter 2014:29). The comparative method and comparative education, with the education systems as a field of science, are connected in a unique way (Manzon 2011:95). Bereday (1964:29) is of the opinion that the comparative method is ideal when comparing different aspects of education systems. Steyn (2008:1) describes the different phases of the comparative method as follows:

- The first step is identifying aspects to be compared from the applicable education systems. These relevant aspects are identified based on theoretical and practical analysis and on the boundaries and limitations set out by the research design and the research foci for comparison.

- The second step is describing the aspects that must be compared. The description or ordering is done based on the available theoretical basis and by means of a relevant phenomenon analysis. The description is split (simplified) into short statements or indicators to summarise the key features of the relevant topic.
- The third step is sequencing (juxtaposition and relation) of the aspects to be compared. In this phase, the indicators of the aspects to be compared are arranged side by side (or not necessarily side by side, but in such a format that the comparables can be seen). The indicators are thus described in such a way that corresponding indicators can be linked.
- The fourth step is writing down similarities and differences. Simple or conspicuous as well as complex or implicit similarities and differences between the relevant indicators are defined clearly. From similarities, general or universal characteristics can be developed, and from differences, individual characteristics can emerge.
- The fifth step is explaining the similarities and differences. Similarities and differences are explained in the context of relevant theory and external and internal determinants.
- The last step is developing the 'best practice'. From the equation and explanation of the equations, 'lessons learnt' or generalisable practices can be deduced for the purpose of comparison research. After linking these lessons to existing theory or practice, guidelines can be provided as best practice for application in practice or theory.

Purposeful sampling was used to select documents from Brazil, Russia, India, China and South Africa. In terms of sample size, we were guided by documents available in English from each member state. These documents included academic journals, governmental documents and documents relevant to the phenomenon under investigation and the understanding of practical implications resulting from the implementation of educational aims in a given context. Firstly, through running various online searches, we identified and selected documents

pertaining to educational objectives of BRICS and action plans on individual (each member state) and collective (as an organisation) level. Such documents included, but were not limited to (1) policy briefs, ministry annual reports and council declarations from each individual member state; (2) UNESCO reports and declarations; (3) memorandum of understanding between the member states; and (4) BRICS official documents, along with notes of meetings.

The BRICS Project was approved by the Edu-HRight research unit of the North-West University, and research ethics clearance was obtained from the Scientific Committee of the North-West University. The research methods and sources should be chosen based on their ability to provide insights into the phenomenon of interest. As indicated by Creswell (2013), this sampling strategy is meant to build complexity into the research when sampling participants or sites. This purposeful sampling aligns with our intention to understand perspectives within different contexts (BRICS countries).

The selected documents were entered into applicable qualitative software whereupon the relevant sections were coded one by one. The documents were first categorised according to the context and their original purpose (e.g. action plan). Then, each document was critically reviewed to determine the relevance of each section to the research study. According to Bowen (2009), document analysis involves skimming (superficial examination), reading and re-reading (thorough examination) and interpreting. This process combined elements of content analysis and thematic analysis (cf. Fereday & Muir-Cochrane 2006). In the study, content analysis was a process of organising information into categories related to the context and research questions. During the thematic analysis, codes were identified and grouped into specific themes. As stated by Olson (2017), document analysis as a research method is particularly applicable to qualitative studies because documents can provide data about the context within which participants operate. Documents can also help uncover meaning, develop understandings and discover

insights relevant to the research problem. After the themes have been identified for each context, we will use comparison to identify the similarities and differences between the member states. We will then compare the themes emerged from each context with the themes identified in documents of the BRICS organisation as a collective.

Miller and Salkind (2002:164) explain that qualitative data analysis software enables researchers 'to systematically analyse text or image files, categorise and code information, build descriptions and themes, sort and locate important data segments, and provide visual display of codes and categories'. The analysis will be treated as an ongoing process. Then, an inductive approach will follow, going from detailed data to general codes and themes.

Throughout the process of data collection and analysis, various strategies will be employed to determine the trustworthiness of our interpretations and findings. As scholars, it is essential for us to show the credibility of our findings; thus, we will employ triangulation and member checking as primary strategies to validate the findings. To deliver accurate and credible findings, a triangulation process and the corroborated evidence from the expert participants (scholars and government officials) both involve the process of documenting and verifying evidence from different individuals, types of data and methods of data collection in descriptions and themes in qualitative research (Rothbauer 2008:892).

At this point, we anticipate some major limitations regarding the collection of data. The cultural, linguistic and contextual differences must be taken into consideration. The Brazilians speak mainly Portuguese, the Chinese speak Modern Mandarin, while the Indians have 23 official languages. Documents in native and official languages will pose a major challenge. We had scheduled a wide-open window for data collection from September 2017 to 2019. During that time, we had been engaged in various relevant research activities (analysing documents,

ongoing literature review, writing research reports and presenting preliminary findings).

■ **Layout of the book**

This book consists of 10 chapters. Chapter 1 is focused on the cooperation theory and the rationale for cooperation between individuals, groups, corporations and countries. Various relevant theories, such as the prisoner's dilemma, the game theory and the tit-for-tat computer tournaments, are discussed. Applicable examples of international cooperation, such as the Cold War between the East and the West and the Trump trade negotiations, have highlighted the need and reasoning for cooperation between people and entities.

Chapter 2 highlights the value and importance of international cooperation in the field of education. Various international organisations, such as UNESCO, the Organisation for Economic Cooperation and Development (OECD) and the World ORT, are evaluated and assessed according to their own aims and objectives.

Chapter 3 delivers a broad overview of the historical evolution of the BRICS organisation. The aims and objectives of the BRICS organisation are stated, and the historical development of the BRICS organisation over the past 10 years (2009–2019) is documented.

In Chapter 4, educational aims and objectives are conceptualised and discussed. Educational aims are concerned with purpose, whereas educational objectives are concerned with achievement. The collective aims of education systems are to provide for the educational needs of the target group or the community at large. A reciprocal relationship exists between the target group and its education system. An education system should preserve and develop culture, provide opportunities to fulfil responsibilities in accordance with the needs of the country,

prepare learners to become responsible citizens and provide competencies to cope with the changing society.

Chapter 5 discusses the development and course of the EFA movement from the first EFA Declaration in Jomtien, Thailand, in 1990 until the last meeting in 2015 in Korea. The EFA objectives over the period and the last EFA Declaration in 2015, with target date 2030, are also documented. We measure the achievement of the BRICS member states of the EFA outcomes and EFA objectives. The chapter also addresses the significance of the BRICS member states' cooperation in the provision of education.

The following chapters focus on the educational aims of individual BRICS countries and compare them with the educational objectives of the BRICS organisation: Chapter 6 – Brazil, Chapter 7 – Russia, Chapter 8 – India, Chapter 9 – China and Chapter 10 – South Africa. The educational aims of the BRICS member states are briefly summarised in the following paragraphs.

The Brazilian educational aims are prescribed by the *National Education Guidelines and Framework Law [Lei de Diretrizes e Bases da Educação – LDB]* of 1996 (Brazil 1996). The *Bases and Guidelines Law* defines the purpose of Brazilian (Brazil 1996:n.p.) education, which include:

- understanding individual rights and responsibilities, as well as those of citizens, the state and other community groups
- respecting people's dignity and fundamental freedom
- strengthening national unity and international solidarity
- the integral development of the human personality and people's participation in the work towards common welfare
- preparing individuals and society to master scientific and technological resources, which will allow them to use existing possibilities to aid common welfare
- protecting, disseminating and expanding cultural heritage
- condemning any unequal treatment resulting from philosophical, political or religious beliefs, as well as any social classes or racial prejudices.

The Russian educational aims are outlined by the Ministry of Education and Science of the Russian Federation (Russian Ministry of Education and Science 2016) and are based on the principles of:

- emphasising the humanistic nature of education; prioritising human values, human life and health and the free development of individuals; promoting civil duties, operation and respect for human rights; caring for the environment; and promoting a sense of responsibility towards society and family
- maintaining the unity of national, cultural and educational organisations; protecting and developing, through the education system, national cultures and local cultural traditions in the Russian Federation, as well as in a multinational state
- making available EFA and improving the adaptability of the education system to the levels of student development and training
- promoting the secular nature of education in educational governmental and municipal institutions
- protecting freedom and pluralism in education
- developing democracy and a combination of the responsibilities of government and public components in education administration
- protecting the autonomy of educational institutions.

The National Education Policy in India (1986, as amended in 1992) was formulated by the National Government of India. This policy refers to the necessity and the role of education in India and focuses on the following educational objectives:

- According to the national view, education is essential for everyone. It is the foundation for total national development, which includes the material and spiritual development of the community.
- Education has an enculturating role. It refines perceptions of sensitive issues, contributing to national cohesion and the formation of a scientific temperament independent of spirit and mind. Education thus promotes the goals of socialism,

secularism and democracy that are entrenched in the Constitution of India.

- Education must develop human resources for different levels of the economy. It guarantees national self-sufficiency.

The *Education Act* of the People's Republic of China (PRC) of 1995 focuses on the following regarding education, with the implicit inclusion of the education system objectives and EFA into the PRC (Yang 2008:429):

- The state will maintain Marxism or Leninism. Mao Zedong's thinking and theories of constructive socialism with Chinese features will serve as a guide and will adhere to the basic principles of the Constitution.
- With education as the foundation for building socialist modernisation in the PRC, the state will give priority to the development of educational enterprises.
- Education will serve as the framework of socialist modernisation, combined with production and labour. Education must meet the needs of training and the development of morality, intelligence and physical development for the sake of the socialist cause.
- The state will provide education to learners to promote patriotism, collectivism and socialism, as well as ethics, discipline, law enforcement, national defence and ethnic unity.
- Citizens of the PRC have the rights and the duty to be trained. Citizens should enjoy equal educational opportunities regardless of nationality, race, gender, occupation, property or religious belief.
- The Chinese (Mandarin) language, both oral and written, will be the basic teaching and learning language in schools and other educational institutions. Schools or other educational institutions consisting mainly of learners from minorities or other nationalities may use the language of the respective nationality or the mother tongue that is generally acceptable in the region.

The White Paper on Education and Training (1995) sets out the guidelines for the provision of education in South Africa:

- Education and training are basic human rights, and the state has an obligation to protect these rights. All citizens must have the opportunity to develop according to their unique potential and needs so that they can contribute to the development of the community.
- Parents and guardians have the primary responsibility for the education of their children. Parents have the right to choose the type of education needed for their children. Parents' right to choose education includes a choice regarding language, culture and religion.
- Education policy should give all individuals the opportunity for lifelong learning and quality education.
- Historical inequalities must be addressed.
- Education must promote general democratic values and the importance of procedural law.
- Education in Mathematics, Science and Technology is essential for human understanding and economic progress.

The educational aims and objectives of BRICS are stated in the following, with focus on higher education, technical vocational education, general education and education policy strategies (BRICS7 2015:1–2).

Higher education:

- Higher education in BRICS should move towards increased collaboration in teaching and research on common knowledge fields.
- Teaching and research centres of excellence should be established at leading universities in the BRICS member states.
- Collaborative research projects should be supported and joint publishing in scientific journals should be promoted.
- The BRICS Education Ministers want to improve cooperation in the recognition of degrees and diplomas amongst themselves.

- The BRICS Education Ministers also support the establishment of the BRICS University League.
- The BRICS must now be constituted, as prescribed by the collaboration agreement mentioned above.

Technical vocational education:

- The BRICS Education Ministers emphasise the important role of technical vocational education in the labour market.
- The development and sharing of ideas, concepts, methods and tools that can determine supply and demand for labour are essential.
- Vocational education must be enhanced by initiatives that enhance skills development so that best practices can be used by BRICS.
- There must be collaboration on specific projects initiated by the BRICS Skills Development Working Group of the BRICS Business Council.

General education:

- BRICS encourages comparative research on the quality of education so that norms between BRICS member states could be established.
- Lifelong learning must be promoted, and self-education through formal and informal education should be encouraged.
- Opportunities should be provided for learning of other languages to ensure business and professional communication.

Education policy strategies:

- Official representatives from each BRICS member country should be appointed to coordinate programmes and projects.
- Member states need to invest cooperatively in education to promote economic growth and human resource development.
- Member states must share statistical data and develop methodology so that general education indicators could be developed.
- The exchange of information regarding national assessment systems of BRICS member states should be ensured.

■ Conclusion

The BRICS organisation was established in 2009. Cooperation has developed across many areas of interest. This chapter has focused on the theory of cooperation, including the game theory and social dilemmas. The BRICS organisation has to be aware of the different theories in order to work together on such a large scale. This book, entitled *A New Dawn*, Volume 1 in the book series *BRICS Education*, specifically focuses on the complexities regarding education cooperation, as set out in the BRICS statements of cooperation in education. The educational aims of the BRICS member states are compared to evaluate the progress regarding common educational goals and objectives of BRICS.

The value of international cooperation in education

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■ Introduction

This chapter investigates the value of international cooperation organisations in the supply of education. Three large international cooperation organisations, actively involved in education, were selected for the study, namely, the OECD, *Obshestvo Remeslenofo Zemledlchefskefo Truda* (ORT) [the Society for Commercial and Agricultural Labour] and the UNESCO. Many international cooperation agreements and organisations exist, and many of them view education as an important instrument in realising their aims. There are also many examples of organisations that collaborate in the area of education supply and improving access to education. Education for All constantly emerges as an inspiring ideal. Collaboration has its particular advantages and disadvantages, which should be taken into account when pondering on cooperation organisations in general, and in particular, where BRICS is still in its infancy. In the end, the importance and the value of international cooperation stand above doubt. International cooperation organisations, such as UNESCO, OECD and the World ORT, add value to education all around the world. While all the targets and aims of these organisations are not being met, they still have a significant impact on and add value to education supply. Fifty-four member states of UNESCO have failed to achieve the Millennium Development Goals (MDGs) by 2015, but what is positive is that 189 nations had signed the agreement. The conclusion can be drawn that 138 countries met the targets. This is an indication of the value of international synergy in pursuing education supply. International cooperation organisations add value to education supply for their member states. Although all member states of such organisations may not always achieve set targets within the prescribed timelines, there is a consistent general trend towards achieving the originally set objectives. Education supply is therefore being improved.

The aim of this chapter is to determine the value of the most salient organisations (OECD, World ORT and UNESCO) in order to assess their impact on education.

■ Statement of problem

South African education leaves much to be desired. Numerous international measuring instruments confirm this statement. For example, South Africa was one amongst the 60 national education systems that participated in the Trends in International Mathematics and Science Study (Mullis et al. 2012). The results of this study placed South Africa, Botswana and Honduras last in the list. Similarly, the Progress in International Reading Literacy Study (PIRLS) (Mullis et al. 2012), one of the most extensive international literacy assessment exercises, has shown that the South African education system has not produced the desired outputs. The findings of this study included the following:

- Forty-three per cent of Grade 5 learners in South Africa do not have the basic reading skills regarded as necessary for reading on Grade 4 level.
- Twenty-nine per cent of Grade 4 learners have not mastered the basic reading skills needed for reading on Grade 2 level.
- Fifty-seven per cent of Sepedi learners have not achieved the lowest international standards.

The UN, which was established in 1945, is one of the best-known examples of international cooperation. The objectives of this organisation include the prevention of war and the maintenance of peace, the entrenchment of human rights, the establishment and maintenance of international law, and social development in order to promote a better level of living and more freedom for people (UNESCO 2013).

Another example of international cooperation is the European Union (EU). The EU (UNESCO 2013) is a unique economic and political partnership that covers a large part of Europe. The first step of the EU was to promote economic cooperation. The direction-giving idea was that countries trading with one another will be economically interdependent and will, therefore, avoid conflict with one another.

Many of these international organisations discussed above use education, in one way or another, to achieve the objectives of cooperation. In a thought-provoking, recently published book on the present and future world, Frankopan (2018) contrasts the Eastern or Asian countries' (especially China, but also the Republics of Central Asia, Iran and Turkey, and the countries of South Asia) drive to establish links (an extension of the 'Road and Belt' Project of China) to the Western nations' recent trend for inversion and nations withdrawing into their own shells. Frankopan (2018) predicts that these trends will change the world order, paving the way for the ending of Western global hegemony and the commencement of a Century of Asia.

From the above, the following problem questions can be formulated:

- What is the significance of international cooperation organisations with respect to the supply of education?
- Can South Africa's joining of the BRICS organisation add any value to South Africa's education project?

■ Conceptual-theoretical framework

The following concepts are discussed in order to gain clarity on the principles and importance of international cooperation, especially with respect to the establishment of an effective education system satisfying the needs of a target group.

■ International cooperation

The word 'international' is a combination of two words 'inter' and 'national'. The prefix 'inter-' is derived from the Latin word *tumulo*. The *Collins English Dictionary* (2015) defines 'inter' as 'between or among and also together, mutual and interdependent'. The *Oxford English Dictionary* (2015:n.p.) defines the word 'national' as 'it relates or is a characteristic of a nation and it is common to a specific nation'. The term 'international' is explained

by Pharos Dictionaries (2019:n.p.) as ‘involving two or more nations, or done by two or more nations’. Therefore, ‘international’ refers to the relationships amongst various nations and their citizens.

The *Oxford Dictionary* (2016:n.p.) defines the term ‘cooperation’ as ‘the process where groups work together for the sake of a common/mutual benefit’. Axelrod (2000) and Keohane (1985:226) state that cooperation takes place when role-players change their behaviour according to the real or expected preferences of others.

Paulo (2014) describes international cooperation as the interactions amongst various countries in order to achieve general or common goals, where the preferences of the role-players are either identical (harmony) or different (conflict). International cooperation therefore is the interaction between people or groups of people of different nations in pursuit of a joint goal.

A variety of international organisations exist specifically for collaboration in order to achieve common goals. The Japanese International Cooperation Agency (JICA), the Centre for International Cooperation (CIC) and the International Cooperation Alliance (COOP) are some examples of organisations that promote international cooperation. The vision of JICA (2015) focuses on inclusive and dynamic development. Inclusive development represents an approach to development in which the potential of all people is tapped into, while dynamic development refers to the creation and promotion of cycles of medium- and long-term economic growth and the reduction of poverty in a constantly changing environment. The CIC (2015) conducts analyses and creates ideas and policies required for international cooperation, focusing on the promotion of peace and security, the improvement of government, the safeguarding of strategic resources and addressing climate change. The International Cooperation Alliance (2015) is more directed at cooperation at the level of policy. The focus is on economic growth, sustainability, food security,

infrastructure and providing people with the opportunity for effective communication. Furthermore, various international cooperation organisations focusing on education exist.

■ Value

The *Oxford Learner's Dictionary* (2017:n.p.) defines the term 'value' as 'the quality of being useful or important, or moral or professional standards of behaviour'. The *Oxford Dictionary* (2017:n.p.) gives the following words as synonyms for 'value':

- principles
- ethics
- moral code
- moral values
- standards
- moral standards
- code of behaviour
- rules of conduct
- standards of behaviour.

It defines values as '[t]he regard that something is held to deserve; the importance, worth, or usefulness of something' (*Oxford Dictionary* 2017:n.p.).

It appears that the term 'value' can assume one of two meanings: the value of an item such as a car or a house, or the quality or the utility of, for example, a country. In this chapter, the term 'value' is used with the first of the two possible meanings.

■ Education supply

■ Education

Steyn, Wolhuter, Vos and De Beer (2017) define education as deliberately planned activities whereby educators enable learners to acquire desired capabilities (knowledge, skills and attitudes) so that they can fulfil their vocation and roles in life.

To the phrase ‘the teaching profession’, dictionaries (eHAT 2015; *Oxford Dictionary* 2017; Steyn et al. 2017) attach meanings of educating, teaching, teaching according to a structured plan and the systematic transmission of knowledge, skills and attitudes.

■ Supply

In this chapter, the term ‘supply’ is used to refer to providing in or satisfying a need (PharosOnline 2017). The question here is, ‘who supplies education?’ And in this regard, of what value can international cooperation organisations be in the supply of education?

From the above discussion, the following question arises: can international cooperation organisations be of any value or utility in the supply of deliberately planned education programmes so that learners could acquire the knowledge, skills and attitudes required to fulfil their roles in life?

■ Theoretical framework

Subsequently, the spotlight falls on some theories on international cooperation.

■ Theories on international cooperation

The aim of this research was to determine the value of underlying cooperation by the member states of international organisations with respect to the supply of education in such member states. In order to achieve this goal, the significance of a number of international organisations in the supply of education was investigated.

From the literature dealing with international cooperation amongst countries, it appears that there are many examples of vibrant and successful, productive cooperation. There are, however, also many of these organisations that do not achieve at

least some of their self-set goals, for example, the 54 member states of UNESCO that failed to achieve the goal of universal primary education. It is therefore important to turn to cooperation theories as a basis for exploring and assessing the scope for BRICS cooperation in the field of education.

The cooperation theory on neoliberal institutionalism must rank as one of the most interesting and most important developments in international cooperation theories in modern times (Axelrod 1984; Keohane 1984; Lipson 1984; Snidal 1985). According to Fearon (1998:1), theorists on cooperation argue that various international issues, such as finance, weapon control and the environment, have different strategic structures. These strategic structures have a pivotal effect on international cooperation. The various strategic structures are informed by cooperation theories and models and include simple matrix games such as Chicken, Deadlock, Reindeer Hunting, Money Game and Prisoner's Dilemma (Fearon 1998). Subsequently, the two-person social dilemma, akin to the prisoner's dilemma, will be discussed in more detail.

Flood and Dresner (1950) designed a game that is the most simple example of the two-person dilemma. What will be the choice between the options open to participants? The available options are mutual reneging, giving each part a small advantage; mutual cooperation or adherence, giving each an average advantage; or unequal decision, giving one more advantage than the other.

Kuhn and Tucker (1950) developed a story to illustrate Flood and Dresner's (1950) game. In this game, two thieves are caught, but the police lack sufficient evidence to find them guilty. The police separate the two from each other and make the same offer to both: if Accused A (offender) gives evidence against Accused B (accomplice) and Accused B does not give evidence against Accused A, then the offender will be free and the accomplice will go to prison for 1 year; if both accused refuse to give evidence, each will go to prison for one month; and if one

gives evidence against the other, each will get three months' imprisonment.

From the above examples of cooperation models and theories, the complexity and social dilemmas involved appear. Any nation will only cooperate if they stand to gain some advantage of such cooperation. Recent examples include the cooperation amongst BRICS countries, such as financial investment by China in infrastructural development in Africa, as well as the (now aborted) nuclear power cooperation agreements between Russia and South Africa.

Cooperation should, as in Tucker's (1950) game, result in effective collaboration whereby a win-win situation is established.

Axelrod (2000) enumerates the following principles for effective cooperation: avoid envy about the profits of the other party, person or country. It is not a win-or-lose relationship. The best strategy benefits both parties. Commence with cooperation and do not be the first party to renege. Be accommodating. Be fair, and avoid being erratic. Do not be mean. Learn from previous mistakes. Be forgiving. Give the other party, person or country a second chance. Be reliable and a stalwart. Make sure the other parties, persons or countries can trust one another.

Axelrod's (2000) principles for effective cooperation should also be noted. Cooperation, according to Axelrod (2000:136), answers three pivotal theoretical questions. The first question deals with the preconditions out of which cooperation originates and is being maintained by egoistic role-players. The next question deals with the advice that could be given to role-players in a specific situation regarding the best strategy to follow. The final question has to do with which advice could be given to reformers when they are changing the terms of interaction in order to promote cooperation.

These three theoretical questions on cooperation theories are relevant to the aim of this chapter, namely, international cooperation for the promotion of education supply. Although the

main objective is international cooperation in education supply and existing examples in that regard, it became clear very early that consideration should also be given to cooperation theories in general, without digressing from the main focus.

■ International cooperation in education supply

■ International organisations

Various organisations exist that cooperate at international level in an attempt to improve education supply in their respective countries. From these organisations, a selection was made based on the following criteria:

- size of the organisation
- aims of the organisation
- educational aims of the organisation
- age of the organisation.

International cooperation organisations that focus on education should be thoroughly assessed in terms of the question of whether they achieve their objectives and add value to the supply of education. Subsequently, three organisations focusing on education will be discussed.

■ United Nations Educational, Scientific and Cultural Organisation

The United Nations Educational, Scientific and Cultural Organisation is a specialised agency of the UN. It was formed on 14 November 1946, after the UNESCO Constitution had been drawn up and had been accepted. The aim of UNESCO (2013) is to contribute to peace and security by means of education, science and culture. Other priorities include the achievement of

quality EFA and lifelong learning, the development of evolving social and ethical challenges, the promotion of cultural diversity, the development of a culture of peace, promoting respect for justice, the rule of law and human rights, and building inclusive social knowledge through information and communication technology. These priorities have been proclaimed in the United Nations Manifesto (UNESCO 2015). The United Nations Educational, Scientific and Cultural Organisation has 196 member states and nine associate member states.

The idea behind the creation of UNESCO was that, as war starts in the minds of people, the best strategy to combat and prevent wars was also in the minds of people, that is, through education. Thus:

UNESCO was created in order to respond to the firm belief of nations, forged by two world wars in less than a generation, that political and economic agreements are not enough to build a lasting peace. (UNESCO 2016a:n.p.)

Peace must be established on the basis of humanity's moral and intellectual solidarity (UNESCO 2016a).

UNESCO (2016a:n.p.) strives to build networks amongst nations that enable this kind of solidarity by:

- Mobilising for education so that every child (boy or girl) has access to quality education as a fundamental human right and as a prerequisite for human development.
- Building intercultural understanding through the protection of heritage and support for cultural diversity – UNESCO created the idea of World Heritage to protect sites of outstanding universal value.
- Pursuing scientific cooperation, such as early warning systems for tsunamis or transboundary water management agreements, to strengthen ties amongst nations and societies.
- Protecting freedom of expression – an essential condition for democracy, development and human dignity.

□ **United Nations Educational, Scientific and Cultural Organisation's vision of universal adult literacy by 2000**

Since the invention of writing some five millennia ago, the growth of adult literacy has been painstakingly slow, until the 50% mark was reached in 1955. In the second half of the 20th century, the goal of universal adult literacy was feverishly pursued. The United Nations Educational, Scientific and Cultural Organisation, the Creed of Human Rights and the growing belief in education as a panacea for all societal ills (to be explained in the following chapter, 'The Historical Evolution of the BRICS Organisation') each played a significant part in this change. The vision of universal adult literacy by 2000 became an inspiring rallying point and concrete goal of UNESCO. The United Nations Educational, Scientific and Cultural Organisation launched many initiatives in this regard, including, in the late 1960s, the Experimental World Literacy Programme, which ran in 12 countries (Algeria, Ecuador, Ethiopia, Guinea, India, Iran, Madagascar, Mali, Sudan, Syria, Tanzania and Venezuela). This experiment was supplemented by many other initiatives of UNESCO, as well as by many adult literacy projects by governments. By 2000, the global adult literacy rate was 76.96%, while there were still 788.26 million non-literate adults in the world (UNESCO 2016b). The intention is not to denigrate the sterling work done by UNESCO in spreading adult literacy in the 20th century, nor is it the intention to promote adult literacy as the only activity with which UNESCO occupied itself in the 20th century. The intention is merely to illustrate the scope of work that still needs to be done, at the most elementary level, in the global education expansion project. The goal of universal adult literacy will appear again in subsequent global education initiatives in the 21st century. These initiatives will be discussed in the upcoming sections of this chapter.

□ Education for All

A major initiative that was launched by UNESCO and that captured the imagination of the global community was the EFA drive (UNESCO 2016c):

In 1990, delegates from 155 countries, as well as representatives from some 150 governmental and non-governmental organisations, agreed at the World Conference on EFA in Jomtien, Thailand (5–9 March 1990) to make primary education accessible to all children and to [*have illiteracy*] massively [*reduced by*] the end of the decade. (n.p.)

The conference adopted the World Declaration on EFA (or ‘Jomtien Declaration’) (UNESCO 1990). The aim of universalising access to primary education was spelt out in the declaration. Other main tenets of the document are a focus on learning, a broadened meaning being attached to basic education and the strengthening of partnerships in the pursuit of the goal of EFA.

Attaining quality EFA and lifelong learning are among UNESCO’s pivotal education objectives. Already in 2000, UNESCO (2000) presented a dark picture with the assessment project of EFA by referring to the following: of the more than 800 million children under the age of 6 years globally, less than one-third have the advantage of some form of pre-primary education; 113 million children, of which 60% are female, have no access to primary education; and at least 880 million adults are non-literate, the majority of whom are females.

Ten years after the Jomtien Declaration, an assessment exercise was carried out, from 26 to 28 April 2000, in Dakar, Senegal. More than 1000 participants from 164 countries attended, and at the end of it, the Dakar Framework for Action, Education for All: Meeting Our Collective Commitments (UNESCO 2000:43) was adopted, which explained the following objectives that were intended to be achieved by 2015:

- Expanding and improving comprehensive early childhood care and education, particularly for the most vulnerable and disadvantaged children.
- Ensuring that by 2015, all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to complete, free and compulsory primary education of good quality.
- Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programmes.
- Achieving a 50% improvement in levels of adult literacy by 2015, particularly for women, and equitable access to basic and continuing education for all adults.
- Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality.
- Improving all aspects of the quality of education, and ensuring excellence of all, so that recognised and measurable learning outcomes are achieved by all, particularly in literacy, numeracy and essential life skills.

The next rallying point of the global community with respect to the expansion of education can be found in the MDGs (UNESCO 2016d):

At the beginning of the new millennium, [*in 2000*] world leaders gathered under the [*direction of the*] UN to shape a broad vision to fight poverty in its many dimensions. That vision, which was translated into eight MDGs, remained the overarching development framework for the world for the [*following*] 15 years. (n.p.)

These goals, one of which directly addressed education, were (UNESCO 2016d:4):

- to eradicate extreme poverty and hunger
- to achieve universal primary education (the primary school net enrolment rate in the developing regions had reached from 83% in 2000 to 91% in 2015)

- to promote gender equality and empower women
- to reduce child mortality
- to improve maternal health
- to combat HIV and AIDS, malaria and other diseases
- to ensure environmental sustainability
- to develop a global partnership for development.

Once the target date of 2015 for the MDGs was reached, the most recent global education initiative, the Incheon Declaration, was formulated. The United Nations Educational, Scientific and Cultural Organisation, together with the United Nations Children's Emergency Fund (UNICEF), the World Bank and a few other organisations, organised the World Education Forum 2015 in Incheon, Republic of Korea, from 19 to 22 May 2015. More than 1600 participants from 160 countries, including over 120 ministers, heads and members of delegations, heads of agencies and officials of multilateral and bilateral organisations, as well as representatives of civil society, teaching profession, the youth and the private sector, adopted the Incheon Declaration for Education 2030, which set out a new vision for education for the next 15 years (cf. UNESCO 2016d:n.p.). This plan spells out a vision of inclusive and equitable quality education and lifelong learning for all. The plan sets as goal 12 years of free, publicly funded, equitable quality primary and secondary education, of which at least 9 years are compulsory, leading to relevant learning outcomes (UNESCO 2016d:n.p.). While acknowledging that the fundamental responsibility for successfully implementing this agenda lies with governments, the declaration calls for strong global and regional collaboration, cooperation, coordination and monitoring of the implementation of the education agenda, based on data collection, analysis and reporting at the country level, within the framework of regional entities, mechanisms and strategies (UNESCO 2016d:n.p.).

The United Nations Educational, Scientific and Cultural Organisation groups its activities in five programme areas, namely, education, natural sciences, social sciences and

humanities, culture, and communication and information. It supports research in comparative education and supplies expertise and promotes partnerships in order to strengthen national education leadership and to build capacity in countries to supply quality education to all.

In addition, UNESCO focuses specifically on EFA in view of the following objectives with respect to education supply on global level: the extension and taking care of education in the early childhood years in order to ensure that all children – especially girls, children in adverse circumstances and those belonging to ethnic minority groups – have access to full, free and compulsory primary education of high quality; ensuring that the education needs of all young people and adults are being satisfied by means of fair access to relevant learning and life skills programmes and the reduction of adult non-literacy levels, of women, in particular; ensuring equal access to adult basic and continuing education; the eradication of gender inequalities in primary and secondary education; and ensuring that all achieve quality education as measured by accepted and measurable outcomes, in literacy, numeracy and basic life skills.

At the 37th meeting of the UN, its new 2014-to-2021 medium-term strategy was approved (UNESCO 2016a). This strategy included nine objectives that were not linked to specific programmes. Cooperation amongst the five main programmes, namely, education, natural sciences, social sciences, culture, and communication and information, is required. EFA forms part of the new objectives. These objectives are:

- giving support to member states to develop high-quality education systems and lifelong learning
- empowering learners to be creative and to be responsible global citizens
- promoting EFA as well as planning an education agenda for the future

- strengthening national and international science, technology and innovation systems
- promoting international scientific collaboration with respect to critical challenges concerning sustainable development
- supporting inclusive social development and promoting intercultural dialogue
- protecting cultural heritage
- securing creativity and diversity of cultural expression
- promoting freedom of expression, media development and access to information and knowledge.

The United Nations Educational, Scientific and Cultural Organisation is one of the largest organisations promoting international cooperation. From the above objectives, the focus of education supply and education policy issues enjoying attention is evident. However, Fiszbein and Bustille (2015) put criticism regarding objectives that were not realised. Since the early 1960s, with the Addis Ababa Conference and the best intentions, the international community has regularly attempted to formulate and pursue concrete objectives and targets in education. Sadly, these objectives have not materialised. Even the most recent MDGs, which set targets for 2015, failed to realise. Indeed, 54 countries could not achieve the very basic objective of universal primary education by 2015.

The 2015 EFA Global Monitoring Team has measured the successes of UNESCO's EFA Programme (EFA 2015). This Monitoring Team operates independently from UNESCO. The Monitoring Report focuses on the following six objectives:

1. early childhood development and education
2. universal primary education
3. skills for youth and adults
4. adult literacy
5. gender equality
6. quality of education.

The value of UNESCO as an international cooperation organisation is evident from the following discussion.

The Monitoring Report (EFA 2015:15) for Objective 1, which deals with early childhood development and education, gives a global mark of 47% for the 148 countries. It follows that 53% of countries have not yet achieved the set targets. This is an indication of successes as well as challenges.

Achievements include a reduction of early childhood mortality figures by 39%. Furthermore, 184 million children are enrolled in pre-primary education. Pre-primary school attendance is now compulsory in 40 of the 142 countries.

Challenges include the 6.3 million children who died before they reached the age of 5 years. As far as pre-primary education is concerned, in a fifth of all countries, only 30% of children have access to pre-primary education. Moreover, there exists a need for more and better quality teachers.

The Report (EFA 2015) also proposes the following recommendations: (1) pre-primary education should be extended to all children; (2) a need exists for better information and data about early childhood development; and (3) at least one year of early childhood education for all children is recommended.

Objective 2 (EFA 2015:17), which focuses on universal primary education, is given a global mark of 52%. The Report draws attention to the fact that 9% of the countries are still far from attaining the set goals and 10% of the countries are close to achieving the goals. This means that 48% of the countries did not meet the objectives.

Successes with respect to universal primary education include the growth in the number of children in primary schools – this figure increased by 48 million learners in the period 1999 to 2015. It is also heartening that the number of learners completing their school careers has increased by 20%.

There are, however, still many challenges: 58 million children are still not in school, and 25 million of them will never attend school; 34 million learners drop out early; and the percentage of those who complete the final year of primary school education has not increased. Furthermore, 34% of children who do not attend school come from conflict-ridden areas, where some level of war can be found.

The following recommendations with respect to universal education can be made: (1) the marginalisation of learners should be addressed for universal primary school attendance to be attained; and (2) the quality of data should be improved so that the progress of learners can be monitored better.

In the Monitoring Report (EFA 2015:24) of Objective 3, which deals with the learning needs of youth at lower secondary school level as well as adult education, a global mark of 45% is allocated (only 75 countries supplied data). This means only 34 countries met the target set by UNESCO. However, there is some good news too. Globally, enrolments at lower and higher secondary school level have increased by 27%. The number of adolescents who were not enrolled at school dropped from 99 million in 1999 to 63 million in 2012. Recommendations include the universalisation of secondary education: (1) the expansion of the two literacy programmes; and (2) once again, the improvement of the data that are incomplete. Some countries supplied no data at all.

Objective 4 addresses adult literacy. The Monitoring Report (EFA 2015:28) highlights various achievements as well as challenges. The main objective was to attain a 50% improvement in adult literacy. A global mark of 23% is attained (data from 75 countries were available). This goal still needs significant attention. In 2000, 18% of the global adult population were non-literate. In 2015, this figure dropped to just 14%. This means that 781 million adults do not have basic literacy skills. Women make out 64% of this group of 781 million people. The main reason for the improvement in adult literacy levels is the rise of literacy amongst educated young adults. It is recommended that

countries with low levels of adult literacy should get to the level set by international standards.

Objective 5 of the Report (EFA 2015:32) deals with gender parity (equality) in primary and secondary education highlights various points (database: 170 countries). Concerning primary education, the 170 countries have made the following progress: 69% of the countries have attained the objectives regarding gender parity in primary education; the picture looks different at secondary education level, however, with only 48% of the countries having reached the goal.

The following statistic is more promising: gender inequality at secondary school level is diminishing. The number of countries where there are fewer than 90 female learners for every 100 male learners at secondary school level has decreased from 30 in 1999 to 19 in 2015 (out of 130 countries). This means that access to education for female learners has improved.

Challenges such as child marriages and teen pregnancies appear to still have a negative effect on female learners. Similarly, poverty has a stronger influence on female enrolment than on male enrolment. In Pakistan, fewer than 70 female learners for every 100 male learners have enjoyed any school education at all.

The following recommendations regarding gender parity (equality) are made: (1) schools should be safe, inclusive and gender-sensitive; (2) teaching and learning should empower learners and should result in positive gender relations; and (3) the allocation of resources should be concentrated on communities where gender inequalities are stark.

Objective 6, the final objective, deals with the quality of education. The Report (EFA 2015:38) focuses, firstly, on the learner-teacher ratio at primary school level. In sub-Saharan Africa, this ratio stands at 42:1. In India, Pakistan and Iran, it is approximately 35:1. In Latin American countries, this figure is 21:1. These figures include unqualified teachers. If the number of unqualified teachers is excluded, the learner-teacher ratio figures come to the following: sub-Saharan Africa - 55:1; India, Pakistan

and Iran – 29:1; and Latin America – 23:1. The learner–teacher ratio has declined in 121 of the 146 countries for which data are available.

The following challenges still have an effect on quality education: there is a shortage of teachers in one-third of the member countries; learners do not learn the most basic of skills, which results in backlogs; and a shortage of learning material and classroom furniture is still being experienced.

The following recommendations are made with respect to quality education: (1) more and better-qualified teachers, better learning material and relevant curricula are needed; and (2) learning outcomes should support quality education.

The above information clearly demonstrates the achievements and challenges of UNESCO with respect to education supply. The rate of movement towards universal primary education has accelerated. In many countries, gender inequalities have been reduced. Many governments make serious work for raising the quality in education. Despite these achievements, huge educational challenges remain for UNESCO. Member states have failed to achieve most of the objectives of EFA. Millions of learners are still not attending school, and 781 million adults are still non-literate. The poorest of the poor and the people who are most disadvantaged (e.g. because of child marriages and teenage pregnancies) are the reasons why many of the EFA objectives have not been met.

■ Organisation of Economic Cooperation and Development

The motto of the OECD is ‘better policy for better life’ (OECD 2015a). The OECD is an international economic organisation consisting of 34 member states, which was established in 1961 with the objective to promote economic development and world trade. It is a forum of countries that have committed themselves to democracy and a free-market economy, providing a platform to compare policy, to search for answers to common problems,

to identify best practices and to coordinate national and international policies amongst member states. The OECD also has specific education objectives with respect to the following: early childhood development and more schools, post-school skills training, innovation in schools, labour market and human capital, inequalities, research and the management of knowledge.

The OECD (2015b) has two important education projects, namely, the Education GPS and the Programme for International Student Assessment (PISA). The Education GPS is the OECD's source of international comparative data for analyses with regard to education policy and practices, as well as opportunities and outcomes of education. The Education GPS supplies the latest information on the ways in which member states develop high-quality, equitable education systems.

The PISA is managed by the OECD and is a triennial international survey that aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old learners. 'Since the year 2000, every three years, 15-year-old learners from randomly selected schools worldwide take tests in the key subjects reading, mathematics and science' (PISA 2016:n.p.). To date, learners representing more than 70 nations have taken part in the PISA. The most recently published results are from the assessment of 2012, and the most recent round of assessments took place in 2015.

The PISA (2012) is the fifth survey of the programme. It measured the reading, mathematical and science competencies (with emphasis on mathematical competencies) of 15-year-olds in 65 countries. Five hundred and ten thousand learners between the ages of 15 year 3 months and 16 year and 2 months participated in PISA 2012. In total, this number represents about 28 million 15-year-olds worldwide (OECD 2015b).

The role of these tests in determining policy borrowing amongst nations is clear from Forestier and Crossley's (2015) study on how England has, in recent years, borrowed education

policies from Hong Kong because of the high achievement of Hong Kong's learners in the PISA tests.

On 16 May 2007, the Council of the OECD accepted a resolution at ministerial level for stronger cooperation with South Africa and other BRICS countries. The OECD's (2015b) collaboration with South Africa covers a wide range of policy issues, such as macroeconomic policy and structural reform, debt management, fiscal policy, national resources, competitiveness, agricultural policy, public management, rural and urban development, war against corruption, innovation in science and technology, and tourism. South Africa also participates in various flagship projects, publications and databases of the OECD, such as economic growth prospects, 'Going for Growth' and employment creation prospects. From this, it is clear that the visibility of the BRICS organisation and its status in the world are enhanced; the members of the OECD now occupy themselves more with the member states of the relatively new BRICS organisation.

Governments increasingly use international comparisons of education opportunities and outcomes as a basis to develop policy, benefitting the social and economic progress of individual citizens (OECD 2015b:3). In 2015, the OECD released a report on Education from a Distance. This report measures the state of education in the OECD countries. The following three aspects are highlighted. Firstly, it is emphasised that education is worth the effort; secondly, there are still inequalities in education; and, thirdly, the public expenditure on education is on a downward trajectory in the OECD countries. On average, governments spend 5.3% of their gross national product on education. Education is being financed mostly by the state. Higher education, in particular, receives ever less funding from governments, on average. The report draws attention to the value of international cooperation with respect to education supply (OECD 2015b:28): the OECD nations have increased spending on Higher Education Institutions (HEIs). Children of immigrants, in particular, benefit from early childhood education. In the age group of 20-24 years,

one-fifth of the population neither work nor are in any further education or training programmes. The gender gap with respect to reading ability is diminishing. About 77% of adults with vocational or non-tertiary education or training are employed. A relation exists between large classes and the amount of time spent on teaching and learning – more time is being used for the establishment of order than on teaching–learning. The average age of teachers is high, with 36% of teachers older than 50 years.

The OECD (2015b:n.p.) countries surely can boast of achievements in education. ‘Education is worth the effort’ is a motto, emphasising the importance of education. The OECD (2015b:27) draws attention to the fact that 80% of adults with tertiary education qualifications in these countries are employed. By contrast, only 60% of adults with no tertiary education qualifications are employed. In addition, people with tertiary education qualifications earn 60% more. Gender disparities exist in some areas but are diminishing. With respect to reading skills, inequalities are narrowing. The decrease in public expenditure on education is the cause for concern. Higher education gets just 64% of its income from the state.

■ **World *Obshestvo Remeslenofo Zemledlchefskefo Truda***

The World ORT was founded in Tsaristic Russia. The name ‘ORT’ is an acronym derived from the Russian words *Obshestvo Remeslenofo Zemledelcheskefo Truda*, which mean ‘The Society for Commercial and Agricultural Labour’. The acronym ‘ORT’ has been in existence for 130 years. The society, which started in Russia, has been an international society since 1960, therefore the name ‘World ORT’ (World ORT 2015).

The Mission Statement of the World ORT reads as follows: the promotion of Jewish and other people by means of education and training; supplying knowledge and skills to communities so that they can hold their own in complex, uncertain environments;

the promotion of economic self-sufficiency and mobility; support to non-sectarian, economic and social development in the underdeveloped parts of the world through international cooperation programmes; and vocational training and technical assistance.

The value of the World ORT as an international cooperation organisation lies in its support to various projects in different countries. These include:

- Myanmar (2012–2013) – National Skills Development Network.
- Liberia (2012–2014) – Literacy Training and Employment Training Programme.
- Haiti (2011–2013) – Saint François d'Assise Vocational School.
- Mali (2011–2014) – Master Craftsmen training.
- African region (2010) – Cooperation with respect to higher education.

The cooperation and development programmes of the World ORT (2015) tie in with its mission statement and focus on, amongst other things, skills development, higher education and further education and training. The achievements of this organisation include the following: 3 million students have graduated from their programmes, and each year more than 300 000 students are delivered. The motto of the organisation is 'Lifelong education'; therefore, it focuses on equipping students with the knowledge and skills required to become economically independent.

■ Research methodology

The aim of this research was to determine whether international cooperation organisations add value to the supply of education in participating countries. This qualitative research focused on features that cannot be reduced to numbers. Documents relating to international cooperation organisations as well as documents dealing with cooperation theories were analysed.

■ Findings

Many international cooperation agreements and organisations exist, and many of these view education as an important instrument in realising their aims. Moreover, there are many examples of organisations that collaborate in the area of education supply and improving access to education. Education for All constantly emerges as an inspiring ideal. Collaboration has its own particular advantages and disadvantages that should be taken into account when pondering cooperation organisations in general, and BRICS in particular, where BRICS is still in its infancy. However, the importance of the value of international cooperation stands above doubt. International cooperation organisations, such as UNESCO, OECD and World ORT, add value to education all around the world. While all the targets and aims of these organisations are not being met, the organisations still have a significant impact on and value for education supply. As was stated earlier, despite 54 member states of UNESCO having failed to achieve the MDGs by 2015, it is positive that 189 nations signed the agreement. The conclusion can be drawn that 138 countries met the targets, which is an indication of the value of international synergy in pursuing education supply.

■ Conclusion

International cooperation organisations add value to education supply for their member states. Although all member states may not always achieve set targets within the prescribed timelines, there is a consistent general trend towards achieving the originally set objectives. Education supply is therefore being improved.

The historical evolution of the BRICS organisation

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■ Introduction

The main focus of this research was to determine and describe the meaning of the BRICS organisation for education provision from the perspective of BRICS member countries. In order to achieve this goal, the historical development and nature, structure and composition, functioning and characteristics of the BRICS organisation must be clearly and critically analysed and described (i.e. BRICSology), based on a comprehensive literature study. The purpose of this literature study is to answer the research question, which focusses on the meaning of education provision by the BRICS organisation. BRICSology then refers to the historical development, nature, composition and functioning of the BRICS member countries.











■ The historical development and nature of the BRICS organisation

The term 'BRIC' was created in 2001 by the former chairman of Goldman Sachs Asset Management, Jim O'Neill, in his publication 'Better Global Economic BRICs' (O'Neill 2001). The foreign ministers of the first four BRIC countries had their first informal meeting in September 2006 at the United Nations General Assembly in New York. It was the start of a series of high-level meetings. The first full-scale diplomatic meeting was held in Yekaterinburg, Russia, on 16 June 2009 (Russian Federation 2009).

Then BRICS came into existence and thus it is the acronym for an association of five major emerging national economies, namely, Brazil, Russia, India, China and South Africa. The group was originally known as 'BRIC', that is, before the inclusion of South Africa in 2010. The BRICS group comprises developing or newly industrialised countries that are characterised by their large, fast-growing economies, with a significant influence on local and global interests. All five member countries of BRICS are also G20 member countries. Since 2010, the BRICS member countries have met annually at formal BRICS summits. Seven such BRICS summits have already been held until 2015. Russia chaired BRICS in 2015

and housed the seventh summit of the group in July 2015. Table 3.1 shows the time course, the responsible leaders and their respective countries.

TABLE 3.1: BRICS summits: 2009 to 2018.

Summit	Date	Country	Leader	Place	Milestones
 BRIC1	16 June 2009	Russia	Dmitry Medvedev	Yekaterinburg Sevastianov	First meeting: 16 conclusions and aspects
 BRIC2	15 April 2010	Brazil	Luiz Inácio Lula da Silva	Brazil	Guests: Jacob Zuma of South Africa and Riyad al-Maliki (Foreign Minister of Palestine)
 BRICS3	14 April 2011	China	Hu Jintao	Sanya (Sheraton Sanya Resort)	First meeting including South Africa
 BRICS4	29 March 2012	India	Manmohan Singh	New Delhi (Taj Mahal Hotel)	Development Bank under discussion
 BRICS5	26–27 March 2013	South Africa	Jacob Zuma	Durban (Durban ICC)	Education goals formulated
 BRICS6	14–16 July 2014	Brazil	Dilma Rousseff	Fortaleza (Centro de Eventos do Ceará) Brasília	Agreement signed regarding BRICS Development Bank and reserve currency Guests: Leaders of the Union of South American Leaders
 BRICS7	08–09 July 2015	Russia	Vladimir Putin	Ufa	Joint consultation with SCO-EEU BRICS Bank realised
 BRICS8	15–16 October 2016	India	Narendra Modi	New Delhi	BRICS Network University (BNU) Focus on institution building, implementation, integration, innovation and continuity with the BRICS NDB and proposal submission
 BRICS9	03–05 September 2017	China	Xi Jinping	Xiamen	Reaffirmation of commitment to BRICS industrial cooperation BRICS Bank in Johannesburg Development of BRICS Local Currency Bond
 BRICS10	25–27 July 2018	South Africa	Cyril Ramaphosa	Johannesburg	Leaders pledge support for UN and HLPF Establishment of BRICS Partnership on New Industrial Revolution (PartNIR)

NDB, New Development Bank; UN, United Nations; SCO, Shanghai Cooperation Organization; EEU, Eurasian Economic Union; HLPF, High-Level Political Forum on Sustainable Development; BRICS, Brazil, Russia, India, China and South Africa.

■ BRIC1

The first BRIC summit (BRIC1) in Yekaterinburg, Russia, focused on the then existing situation in the global economy and other urgent issues of global development, as well as prospects for further enhanced cooperation amongst the then BRIC member countries, which, however, did not include South Africa. The following aspects were identified at the first BRIC summit (Russian Federation 2009).

Emphasis was placed on the central role of the G20 leaders in dealing with financial crises, while appeals were made to all countries and relevant international bodies to effectively implement the resolutions of the 2009 G20 summit in London. A link to the reform of the international financial institutions to reflect changes in the global economy has been formed. Emerging and developing economies should acquire greater voting rights and representation in the international financial institutions, and their heads and managers must be appointed through an open, transparent and merit-based selection process. It was confirmed that a strong need exists for a stable, predictable and more diversified international monetary system.

A reformed financial and economic architecture must be based on, *inter alia*, the following principles:

- Democratic and transparent decision-making and implementation of processes with international financial organisations.
- An acceptable legal base.
- Compatibility of activities of national regulatory institutions and international bodies.
- Strengthening risk management and supervisory practices.
- Recognition of the important role played by international trade and the influence of direct foreign investment in the global recovery process.
- The poorest countries are affected most by financial crises. The international community must make liquid funds available to these countries. The international community must also strive to reduce the impact of financial crises on developing countries to ensure that the MDGs are achieved.

- The implementation of the concept of sustainable development, which includes the Rio Declaration, the 21st Century Agenda and multilateral environmental agreements, must be a great vector in changing the paradigm of economic development.
- Promoting and coordinating cooperation amongst countries in the field of energy supply, including energy producers, consumers and energy transit countries, in an attempt to reduce uncertainty and ensure stability and sustainability.
- Reaffirming cooperation amongst countries in the important socio-economic area in order to accelerate international humanitarian aid and to reduce the risks of natural disaster management. It also takes note of the discussions surrounding food security.
- The importance of cooperation amongst countries in science and education is acknowledged, where the promotion of research and development of advanced technology takes precedence.
- Emphasising support for a more democratic and fair multipolar world order based on the rule of law, equality, mutual respect, cooperation and collective decision-making of all countries, as well as support for political and diplomatic efforts to resolve disputes in international relations peacefully.
- The condemnation of terrorism in any form and emphasis on the fact that no justification for any act of terrorism will be accepted.
- The strong commitment to multilateral diplomacy with the UN in dealing with global challenges and threats. The need for a comprehensive UN reform with the aim of making it more effective so that it can handle global challenges more effectively is confirmed.
- The importance of India and Brazil in international affairs must be acknowledged.
- The importance of dialogue and cooperation amongst BRIC countries in an incremental, proactive, pragmatic, open and transparent manner is recognised.
- Russia, India and China welcome the friendly invitation to the next BRIC summit in 2010 from host country Brazil.

The first BRIC summit supported the goals of the G20 countries and acknowledged their support. It focused on the reform of international financial institutions, with greater participation from and representation of developing countries, and also explained the importance of helping poor nations that are vulnerable to the rapid financial changes in the global world. For this study, it is also important to take note of the fact that research, technology and education have already been included in the pilot meeting. These education aspects remained important and were further refined, as will be evident from the further historical process of the BRICS organisation.

■ BRIC2

The 2010 BRIC summit (BRIC2) was held on 16 April 2010 in Brazil. This was the second BRIC summit after Yekaterinburg in 2009. South Africa attended this summit as a guest, but it was still known as the 'BRIC summit'. During this summit, the objectives of BRIC were further refined into 32 separate goals (BRICS5 2013b). The goals were categorised here into:

- a shared vision and global governance
- international and financial economic affairs
- international trade and development
- agriculture
- poverty alleviation
- energy
- climate change
- terrorism
- education.

The following summary outlines the individual objectives.

■ BRIC2 objectives

□ Vision and control

BRIC shares the perception that the world is undergoing rapid changes. This implies the transformation of world control

in all areas. Furthermore, BRIC emphasises the support of a fair and democratic world order based on international law, equality and mutual respect. In this summit, the central role of the G20 in world affairs is emphasised. BRIC reveals that the G20 becomes more inclusive and representative, and it also confirms the multilateral, diplomatic role of the UN and appeals to the UN to reform and emphasise the status of India and Brazil in the international environment. Lastly, the importance of mutual cooperation amongst the BRIC member countries and their influence on international issues is emphasised.

□ International and financial economics

- BRIC welcomes the importance of economic growth in which the emerging-market economy plays an important role.
- The relatively stable role of major reserve currencies is underlined.
- Emerging markets and developing countries have a significant role to play in the global economy.
- The G20, with support from BRIC, has increased the resources of the International Monetary Fund (IMF).
- BRIC supports the establishment of a regional monetary currency.

□ International trade

- BRIC emphasises the importance of a multilateral trading system, embodied in the World Trade Organization (WTO), for providing an open, stable, fair and non-discriminatory environment for international trade.
- BRIC commits itself and encourages all countries to resist all forms of trade protectionism.
- BRIC supports Russia's attempt to join the WTO.

□ International development

- BRIC emphasises the importance of the UN Millennium Declaration and the need to achieve the MDGs.

- Poor countries need to be supported in order to achieve the MDGs, in spite of the adverse effects of economic and financial crises.

□ **Agriculture**

- The four member countries discussed the importance of cooperation in agriculture, focusing mainly on subsistence and family farming. The view is that it will contribute to global food production and food security.
- The position leads to the decision to create an agricultural information system of the BRIC countries.
- It is decided that a strategy should also be developed to ensure access to food for the most vulnerable people in order to reduce the negative impact of climate change on food security.
- Cooperation with agricultural technology and innovation must also be improved.

□ **Poverty reduction**

- BRIC has called on the international community to do everything in order to fight poverty, social exclusion and inequality, and to focus especially on developing countries, small islands and African countries. Special attention should also be given to the most vulnerable groups, such as the poor, women, the youth, immigrants and people with disabilities.

□ **Energy**

- Energy is an essential resource for improving people's standard of living, and access to energy is vital for ensuring economic growth with equality and social inclusion.
- BRIC recognises the potential of a new, emerging and environmentally friendly technology for the diversification of energy and the creation of jobs.

- The delegates believe that the BRIC member states can cooperate in the energy sector in terms of training, research and development, consulting services and the transfer of technology.

□ **Climate change**

- It is recognised that climate change is a serious threat and the handling thereof requires urgent global intervention.

□ **Terrorism**

- Terrorist deeds in any form are strongly condemned.
- The prevention of terrorism and its funding must be addressed.

□ **Collaboration**

BRIC welcomes the following sectorial initiatives aimed at promoting cooperation and collaboration amongst its countries:

- the first meeting of the ministers of agriculture and rural development
- meetings of finance ministers and governors of central banks
- the exchange programme for authorities and judges of BRIC countries
- the first meeting of development banks
- the first meeting of the heads of national statistical institutions
- the Conference of Competition Authorities
- the first business room
- the BRIC Brainstorm Conference.

BRIC2 made 32 separate statements, and the scope of cooperation is clear from the above list. At this stage, the statements excluded education cooperation, although research and development cooperation had already been mentioned. As with BRIC1, finance and the reform of international organisations were high on the agenda. International trade, agriculture and poverty alleviation

were also highlighted. Interestingly, a statement was added under the heading 'Cooperation', emphasising the importance of mutual cooperation in the BRIC organisation. Representatives from several governmental departments met during this summit and clear objectives were identified; for example, the compilation of a joint BRIC encyclopaedia and the publication of comparative statistical data from the BRIC member countries.

It was also decided to attend to other initiatives to deepen relationships, including:

- the joint publication of national statistical institutions
- an investigation into the feasibility of the development of a joint BRIC encyclopaedia
- confirmation by BRIC regarding its commitment to promote cooperation amongst BRIC countries in the fields of science, culture and sport.

■ BRICS3

The third BRICS summit was held in China, Sanya, at the Sheraton Sanya Hotel on 14 April 2011. It was the first summit South Africa attended as a full member, and so the group was now called 'BRICS'. The summit focused on global financial reforms, the global economic and financial situation, the multipolarity of global systems, development issues and cooperation amongst member states (China 2011). The Sanya Declaration (CNTV 2011) by the BRICS leadership explained the following:

- The Heads of State of Brazil, Russia, India and China welcome South Africa at BRICS3 and look forward to promoting dialogue and cooperation with South Africa within the forum.
- The BRICS member countries, with a total population of almost 3 billion across different continents, share the overall objective of and desire for peace, security, development and cooperation. The goals of BRICS are to make a significant contribution to the development of humanity and the establishment of a more just and equitable world.

■ BRICS4

The 2012 BRICS summit was the fourth annual BRICS summit. The meeting was held on 29 March 2012 at the Taj Mahal Hotel in New Delhi, India. This was the first time India presented a BRICS summit. The theme of the discussion was 'BRICS Partnership for Global Stability, Security and Progress' (BRICS5 2013b).

BRICS4 established 50 statements as well as the first action plan called the 'Delhi Action Plan'. The 50 statements were a further refinement of the statements of BRICS2 and BRICS3. The most important new statement on the agenda for discussion was the creation of a New Development Bank (NDB). The main objective of the BRICS Bank was to fund development and infrastructure projects in developing and less developed countries, as well as providing long-term loans during global financial crises such as the Euro crisis. Another objective was the issue of convertible debt that could be purchased by central banks of the member countries in order to distribute financial risks. The Brazilian Minister of Trade, Fernando Pimentel, felt that the bank could be used as a very powerful financial instrument to improve trade opportunities and also support the EU to overcome its financial crisis (Sathekge 2012).

The Delhi Action Plan focusses on further cooperation and talks at various levels and across different fields. This includes meetings of BRICS foreign ministers, BRICS finance ministers and financial and tax authorities, BRICS trade ministers, the third meeting of BRICS ministers of agriculture, BRICS representatives for national security, the first meeting of the BRICS Urbanisation Forum, the second BRICS meeting of local government and cooperation, the second meeting of BRICS ministers of health and the third meeting of BRICS on competition. Experts also have to meet regularly on the BRICS Development Bank (BRICS5 2013a).

The Delhi Action Plan also identifies new areas of cooperation. These include multilateral cooperation on energy within the BRICS framework, a general academic BRICS evaluation, a future

long-term strategy for the BRICS dialogue and cooperation in population-related areas about a BRICS youth policy. The scope of the BRICS organisation can already be seen from the Delhi Action Plan. In addition to the 50 statements, cooperation is achieved in many areas. At this stage of BRICS's historical development, education has not yet been on the agenda, although research and a general academic evaluation are referred to. At BRICS5, reference was made to educational objectives for the first time.

The 21st century must be characterised by peace, harmony, cooperation and scientific development. Under the 'Broad Vision, Shared Progress' theme, consensus has been reached through open and in-depth discussions on promoting cooperation amongst BRICS members. The position is that BRICS and other emerging countries play an important role in contributing to world peace, security and stability, promoting global economic growth, enhancing multilateralism and promoting greater democracy in international relations.

In the areas of economy, finance and development, BRICS serves as an important platform for dialogue and cooperation. The BRICS member states are determined to continue strengthening the BRICS Joint Development and Cooperation Partnership in a gradual and pragmatic manner, based on the principles of openness, solidarity and mutual assistance.

The world is currently undergoing radical, complex and profound changes, characterised by strengthening multipolarity, economic globalisation and increasing interdependence. Communication with emerging and developing countries at the international level needs to be improved. BRICS reaffirmed its commitment to multilateral diplomacy and acknowledged the central role of the UN in dealing with global challenges and threats. BRICS confirms the need for a comprehensive UN reform, including its Security Council. The importance of the simultaneous presence of all five BRICS countries in the Security Council during 2011 is emphasised so that there can

be a better representation. BRICS maintains the principle that the independence, sovereignty, unity and territorial integrity of every nation must be respected.

BRICS3 also confirms the objectives of BRICS2. The international financial reform of the UN is still on the agenda. The influence of BRICS member countries on global issues is emphasised more. Van Agtmael (2012), in his article 'Think again: The BRICS', asked whether BRICS is in a class of its own. He confirms the growing, impressive influence of the organisation in terms of population, land and economy. Together the BRICS countries make up 40% of the world's population, which accounts for 25% of the world's surface and owns 20% of the world's Gross Domestic Product (GDP). Even more significant is the fact that the BRICS member countries control 43% of the world's foreign exchange reserves (Van Agtmael 2012:79). BRICS also challenges the financial status quo in its repeated statements during BRIC1 and BRIC2 and again in BRICS3.

■ BRICS5

BRICS5 took place in Durban, South Africa, from 26 to 27 March 2013 (BRICS5 2013a). The theme of the discussion was 'BRICS and Africa: Partnership for Development, Integration and Industrialisation'. The fifth summit and its statements are very important for this study. The first education-based objectives stemmed from BRICS5.

The BRICS leadership declared the following during the Durban summit. At the eThekweni statement in Durban, the discussions focused on the overall theme 'BRICS and Africa: Partnership for Development, Integration and Industrialisation'. It confirms the commitment of the BRICS leadership to the promotion of international law, multilateralism and the central role of the UN. Thus, these discussions reflect the growing intra-BRICS solidarity, as well as the common goal of making a positive contribution to global peace, stability, development and

cooperation. BRICS also considers its role in the international system based on an inclusive approach to shared solidarity and cooperation towards all nations and people (BRICS5 2013b). BRICS5 explains 47 focus points. A summary of the statements is presented here (BRICS5 2013b):

- BRICS member countries strive to progressively develop BRICS into a full-fledged mechanism of current and long-term coordination across a wide range of core issues regarding the world economy and politics. The prevailing global governance architecture is regulated by institutions created in other circumstances than the current challenges and opportunities in which we are now. The global economy has changed, and so we are committed to exploring new models and approaches to more fair development and inclusive global growth, emphasising complementarity and building on our respective economic strengths.
- BRICS aims for involvement and cooperation with non-BRICS countries, especially emerging markets and developing countries, and relevant international and local organisations, as set out in the Sanya Declaration.
- The importance of regional integration for Africa's sustainable growth, development and poverty eradication is recognised. BRICS reaffirms its support for the integration processes of the continent.
- Within the framework of the New Partnership for Africa Development, BRICS supports African countries in their industrialisation process by stimulating foreign direct investment, knowledge exchange, capacity-building and the diversification of imports from Africa.
- BRICS takes note of policy actions in Europe, the United States of America and Japan, aimed at reducing risks in the global economy. Some of these actions have a negative impact on other economies of the world. Significant risks remain and the performance of the global economy continues to decline.

- Central banks in advanced economies reacted with unconventional monetary policy actions in order to increase liquidity. This may later have a negative effect on liquidity.
- BRICS welcomes the core objectives set by the Russian presidency at the G20 summit in 2013, in particular the efforts to increase funding for investments for ensuring public debt sustainability aimed at strong, sustainable, inclusive and balanced growth and job creation in the world.
- Developing countries face challenges such as the development of infrastructure in view of insufficient long-term financing and direct foreign investment, especially investments in capital stocks. In March 2012, a request was made to the BRICS finance ministers to investigate the viability of establishing an NDB for mobilising infrastructure and sustainable development projects in BRICS and other emerging economies and developing countries. Following the report of the ministers of finance, the establishment of a new bank was considered feasible and viable. BRICS has agreed to establish the BRICS Development Bank. The initial contribution to the bank must be substantial and sufficient for the bank to establish infrastructure effectively.
- In June 2012, at a G20 meeting in Los Cabos, Mexico, the ministers of finance and the central banks were tasked to explore the establishment of a financial safety grid through the creation of a 'Preventive Reserve Arrangement' under BRICS countries.
- BRICS member countries are of the opinion that the establishment of the \$100bn initial rate of funding is feasible and desirable, subject to internal legal frameworks and appropriate precautionary measures.
- BRICS welcomes the decision of cooperation between BRICS's export-import banks and development banks with regard to the 'Multilateral Agreement on Cooperation and Joint Financing for Sustainable Development', given the strong growth on the African continent and the substantial infrastructure.

■ BRICS6

The sixth BRICS summit was held in Fortaleza, Brazil (BRICS6 2014). This summit accepted the Fortaleza Declaration and Action Plan, the Agreement on the NDB, the Convention on the Establishment of a BRICS Emergency Reserve Fund and an agreement amongst BRICS member countries with respect of export credit agencies. The theme 'Inclusive Growth: Sustainable Solutions' addressed the debate at Fortaleza. This summit emphasised the successes as well as the great potential of BRICS. BRICS consolidated its position as a positive player in the world (BRICS6 2014). BRICS6 has 72 statements and the action plan includes 22 different items on the agenda.

A condensed version of the statements and action plan is given. Where BRICS1 focused on only a few aspects, the discussion has now expanded exponentially and the scope and importance are clearly highlighted in the 72 sections of the statements, including the following:

- Coordination is well established in several multilateral initiatives, and intra-BRICS cooperation is expanded to new areas.
- BRICS emphasises its openness for increasing involvement with other countries, especially developing countries and emerging-market economies.
- Since the inception of BRICS, it has been guided by the overall objectives of peace, security, development and cooperation.
- The summit took place at a critical time. The international community planned to address the economic recovery after the global financial crisis.
- To better reflect the promotion of the BRICS social policy and the positive impact of economic growth, the organisation requests the national statistical services of the respective member states and the ministries of health and education to work on developing common social indicators methodologies, which should be included in the BRICS Joint Statistical Publication.

- Unemployment and debt levels are worryingly high, and growth is still insufficient in many advanced economies.
- BRICS is pleased to announce that the signing of the agreement for the establishment of the NDB has been completed. The initial capital will be \$50bn and will be funded by the founders. The bank will eventually have \$100bn at its disposal.
- BRICS has also signed a treaty that will set up a \$100bn emergency fund. It aims to stabilise member states' reserves in times of crisis.
- The BRICS member countries express their disappointment with the current non-implementation of the 2010 IMF Funds Reforms, which has a negative impact on the legitimacy, credibility and effectiveness of the IMF.
- BRICS confirms the need for comprehensive UN reforms, including its Security Council, to make it more representative, effective and efficient, and to have it better respond to global challenges.
- Information communication technology must provide tools to promote sustainable economic progress and social inclusion.
- Cooperation must be explored in the fight against cybercrime. BRICS emphasises the negotiation and establishment of a universally binding instrument in relation to cybercrime.
- BRICS recognises the strategic importance of education for sustainable development and inclusive economic growth. The organisation confirms its commitment to the acceleration of achieving the EFA objectives and education-related MDGs by 2015. BRICS wants to strengthen intra-BRICS cooperation in this area and welcomes the ministers of education in Paris at the meeting held in November 2013. The initiative to establish the BRICS Network University (BNU) is encouraged.
- Corruption has a negative impact on sustainable economic growth, the reduction of poverty and financial stability.

The following new initiatives and cooperation possibilities were highlighted as an action plan at the end of the declaration (University of Toronto 2014):

- meeting of BRICS foreign affairs ministers or international relations at the UN General Assembly
- meeting of BRICS finance ministers and central banks at the G20 meetings and IMF meetings, as well as additional meetings as required
- meeting of BRICS trade ministers on the margins of multilateral events, or stand-alone meetings, as required
- meeting of BRICS ministers of agriculture and rural development, preceded by the assembly of the BRICS Agricultural Cooperation Working Group
- meeting of BRICS ministers of health
- meeting of BRICS ministers of science, technology and innovation
- meeting of BRICS ministers of education
- meeting of ministers or senior officials responsible for social security
- BRICS Seminar of Officials and Experts on Population Affairs
- meeting of financial and fiscal authorities at World Bank or IMF meetings
- meeting of the BRICS Contact Group on Economy and Trade by the Contact Group for Economic and Trade Issues (CGETI)
- meeting of the BRICS Local Government Cooperation Forum
- meeting of the BRICS Urbanisation Forum
- meeting of BRICS competition authorities in 2015 in South Africa
- meeting of BRICS heads of national statistical institutions
- meeting of anti-drug experts
- meeting of BRICS experts on counter-corruption
- consultations amongst BRICS embassies, as appropriate, in New York, Vienna, Rome, Paris, Washington, Nairobi and Geneva
- consultative meeting of BRICS senior officials at relevant international forums on sustainable development, environmental and climate-related issues, where applicable.

From the above, the scope of cooperation can be seen clearly. The importance of education for sustainable development is also

highlighted in the statement. Education for All and the education-related MDGs are emphasised as well. The BNU is now also part of the statement for BRICS6.

■ BRICS7

The seventh BRICS summit was held in the Russian city of Ufa in Bashkortostan from 08 to 09 July 2015 (BRICS7 2015a).

The Russian government, led by President Vladimir Putin, identified five priorities for BRICS7. The first priority refers to the strengthening of international peace and security and the promotion of BRICS's interests in the international arena. Furthermore, multilateral facilitation should be undertaken to reform international financial systems. It also focusses on improving trade and economic cooperation amongst BRICS member countries. Social cooperation must be expanded. Lastly, humanitarian cooperation must be deepened. Each BRICS country sets up the agenda and outcomes when a BRICS summit is hosted. However, Russia created order with their second summit. Instead of a significant number of statements and action plans, the Russians refocused on five priorities. These five priorities were further refined into eight specific priorities. After the summit, there were eight important explanations and memoranda of support. For the purpose of this study, the following documents are mentioned in general. Two of the documents, however, apply to this study and are discussed further. The documents include the following (BRICS 2015):

- The Declaration on Quality Labour and the Inclusive Employment Policy by the BRICS ministers of labour.
- Communication of BRICS heads of revenue services focusing on effective tax collection.
- A media statement on the informal meeting of BRICS leaders at the G20 summit in Antalya, dealing with the significant progress of BRICS cooperation; it also emphasises the BRICS Development Bank and the Foreign Exchange Fund, which both represent \$100bn.

- A joint statement from the BRICS Competition Council that deals with the improvement of the competition policy and legislation.
- The BRICS ministers' statement on health services and the improvement thereof.
- The statement of the BRICS ministers of science and technology that deals with the Innovation Work Plan 2015–2018.

The following two documents are discussed in greater detail because they are important for the education focus in BRICS. Firstly, there is the cooperation agreement that deals with the establishment of a network university for BRICS (BRICS7 2015b). BRICS NOW is defined as a network of BRICS HEIs involved in the collaboration and connection at BRICS. BRICS NOW is an educational project aimed at developing preferential bilateral or multilateral joint short-term training and master's and doctorate in philosophy (PhD) programmes. The operation of BRICS focusses on the formation of a new generation of highly qualified, motivated professional academics. BRICS follows the principles of openness and is focused on teaching, network research and innovation, with equal rights for the participants and assuring quality (BRICS7 2015a:3). BRICS NOW will firstly focus on the specialist areas of energy, computer science and information technology security, BRICSology (the study of BRICS), ecology, climate change and water pollution.

The next document of importance is the statement of the third ministerial meeting of ministers held in Moscow on 18 November 2015 (BRICS7 2015b:1). At this meeting, future areas of cooperation in education were discussed for coordination. Previous summits in Brazil and Russia directed the statement and clarified the guidelines. There were four aspects, focused on higher education, technical vocational education, general education and education policy. The statement by the BRICS ministers of education contained the following information.

■ Higher education

According to BRICS7 (2015a:1):

- Higher education in BRICS must move towards increased cooperation with regard to teaching and research on common areas of knowledge.
- Education and research centres of excellence at leading universities in the BRICS member countries must be established.
- Joint research projects should be supported and joint publication in journals must be promoted.
- The BRICS ministers of education also want to create better cooperation with regard to the recognition of degrees and diplomas.
- The BRICS ministers of education support the establishment of the BRICS University League as well.
- Lastly, the BRICS must be constituted as prescribed by the cooperation agreement mentioned above.

■ Technical vocational education

According to BRICS7 (2015a:1):

- The BRICS ministers of education emphasise the important role that technical vocational education plays in the labour market.
- The development and sharing of ideas, concepts, methods and tools that can determine labour supply and demand are essential.
- Vocational education should be strengthened through initiatives that improve skills development so that best practices can be used by BRICS.
- Collaboration with regard to specific projects initiated by the BRICS Skills Development Working Group of the BRICS Business Council is important.

■ General education

According to BRICS7 (2015a:2):

- BRICS encourages comparative research on the quality of education so that norm values can be established amongst BRICS member countries.
- BRICS promotes lifelong learning and encourages self-education through formal and informal education as well.
- BRICS provides opportunities for learning other languages to ensure business and professional communication.

■ Education policy strategies

According to BRICS7 (2015a:2):

- Firstly, official representatives from each BRICS member country should be appointed to coordinate programmes and projects.
- Member states should invest cooperatively in education in order to promote economic growth and human resource development.
- Member states should share statistical data and develop a methodology to develop common education indicators.
- The exchange of information regarding national assessment systems of BRICS member countries must be ensured.

■ BRICS8

The eighth BRICS summit was held in Benaulim, India, from 16 to 17 October in 2016 and was chaired by the Prime Minister of India, Narendra Modi. It was themed 'Building responsive, inclusive and collective solutions'.

A few key points highlighted by the BRICS8 summit are presented here.

The establishment of the BNU took place in Ekaterinburg, Russia, in April 2016 (O'Malley 2016). The first loans from the NDB

were approved, specifically in the field of renewable energy projects in the BRICS countries. On this note, the next UN chief pledged his incessant support and emphasised the UN's 2030 Agenda where developed countries are urged to honour their 0.7% contribution to assist developing countries.

According to the BRICS8 Goa Declaration, it was decided that BRICS countries would maintain a close working relationship with G20 members to reinforce cooperation on a macroeconomic level and encourage sustainable trade and innovation to drive growth globally. In addition, this agenda intended to strengthen financial support systems for developing countries and to promote industrialisation in Africa in terms of, but not limited to, access to energy sources.

Regarding the state of security, the BRICS member countries condemn all forms of terrorism, especially attacks against member countries. During the summit, it was agreed to further reinforce cooperation amongst members to contest terrorist attacks both against BRICS countries and internationally. In this quest, an approach to end terrorism was put forth, and all nations were urged to take part.

From an environmental perspective, the BRICS8 summit placed great emphasis on the conservation of the environment and provided financial and technological support to implement the Paris Agreement in member countries.

The BRICS organisation acknowledged the importance of sustainable development of culture and the fostering of mutual understanding and cooperation amongst citizens of member countries. In this initiative, exchanges are encouraged amongst people of BRICS countries to cultivate cultural appreciation. In relation to this, the challenge of migration was discussed. It is important to make migration and the mobility of people amongst these member countries as orderly, safe and regular as possible, as discussed previously during a meeting of the BRICS ministers of migration in Russia on 08 October 2015.

Key initiatives, according to the Goa Declaration (BRICS 2017) issued during India's chairmanship, include:

- BRICS Agriculture Research Platform.
- Memorandum of Understanding on cooperation amongst BRICS Development Banks and the NDB.
- Memorandum of Understanding on environmental cooperation.
- BRICS Institute for Economic Research and Analysis.
- BRICS Rating Agency.

BRICS Network University

According to Prof. Maxim Khomyakov, who is leading the project, the BNU is dedicated to creating master's and PhD programmes. There will be six thematic groups:

1. BRICS studies
2. energy
3. economics
4. computer science and information science
5. ecology, climate change, and water resources
6. pollution treatment.

The BNU is not institutionalised, but the goal is to work towards this over time (O'Malley 2016). Khomyakov (cited in O'Malley 2016:n.p.) states that 'the network was set up because there was a perception amongst participating countries that education development was lagging behind other BRICS projects'.

In furtherance to the goals set by the BRICS8 summit, the theme draws from all facets, as there is a need to collaborate and to create integration among the BRICS countries, which is not solely limited to politics and economics. By the time the BNU was established, the funding had not been settled yet, but it was decided that each country would contribute. However, Brazil and Russia already had existing programmes that would be utilised as sources of funding for exchange programmes (O'Malley 2016).

Khomyakov (cited in O'Malley 2016:n.p.) asserted that the aim is to have at least five universities that are part of the BNU in the global 100 to 'enhance visibility and contribute to academic reputation' in the future.

■ BRICS9

The ninth BRICS summit was held in Xiamen, China, on 04 September 2017 with the leaders of the Federative Republic of Brazil, the Russian Federation, the Republic of India, the PRC and the Republic of South Africa. The theme of the summit was 'BRICS: Stronger partnership for a brighter future'. The focus of this summit was to focus on the future development of BRICS and to reflect on the achievements of the past (DIRCO 2017).

Emphasis was placed on cooperation amongst the BRICS member countries, their growing economies and the improvement of the livelihood of the people. Furthermore, the challenges and prospective projects proposed in BRICS8 and preceding summits were highlighted, with special attention to the NDB, BRICS Economic Partnership and the Contingent Reserve Arrangement.

Trusting in the further development of member countries, cooperation is essential and will be strengthened by means of the following guidelines (DIRCO 2017):

- An exchange of experiences and good practices is essential for development as well as interconnected development to benefit all roleplaying parties.
- Communication and coordination will be enhanced in order for global economic governance to improve, which will then, in turn, foster unbiased economic order. Focus must be placed on the representation of BRICS countries in global economic governance to address imbalances to progress and to encourage global growth.
- Regarding peace and security, the UN will be held in a central position to uphold international law, which includes the promotion of democracy and addressing the challenges of security.

- Lastly, cultural diversity will be promoted through exchanges between the BRICS member countries and the fostering of relationships through mutual cooperation and communication amongst different cultures to enrich BRICS partnerships.

■ Economic cooperation

As one of the milestones reached during this summit, BRICS reaffirmed the commitment to industrial cooperation and sustainable development, as suggested in the 2030 Action Plan discussed in the 2016 BRICS8 summit. As for the outcomes from previous meetings, the BRICS E-Commerce Working Group was established, alongside the BRICS E-Port Network; this would mean trade and investment cooperation, which would in turn unlock the potential of the BRICS economies, as it was agreed upon to broaden trade, investment and scope.

The proposed 2030 Sustainable Development Action Plan was put into practice in the economic, environmental and social sectors.

In 2015, it was decided that the NDB would have its headquarters in Shanghai, China, as China contributed \$41bn, the most funding to the NDB as an initial investment. It was decided that the regional centre for the NDB should be in Johannesburg, South Africa (Ernstzen 2015). In 2017, the regional centre was opened in Sandton in Johannesburg, South Africa (DIRCO 2017).

■ Global economic governance

The importance of an inclusive world economy was highlighted during the ninth BRICS summit. This was to ensure a share in the benefits provided by globalisation. In addition, it was proposed, and the commitment was reaffirmed, that a global tax system should be implemented (DIRCO 2017).

■ Communication, cooperation and education

The importance of good relations amongst the BRICS member countries is critical for future development. The focus is placed on mutual understanding, cooperation and friendship amongst BRICS countries to secure the exchange of knowledge, ideas and skills. Through this process, emphasis is placed on the role of culture and diversity in order to promote sustainable development of all other aspects.

The BRICS Culture Festival was established to promote culture and diversity. The objective of the action plan was to facilitate cultural cooperation. As an extension, the following alliances were established:

- BRICS Alliance of Libraries
- BRICS Alliance of Museums
- BRICS Alliance of Art Museums and National Galleries
- BRICS Alliance of Theatres for Children and Young Adults.

The first BRICS Culture Festival was held in September 2017 in Xiamen, China.

On the educational front, the concept of sustainable development is a key role-player. By encouraging sustainable social and economic development as well as BRICS partnerships, positive advancement of education can be commended. In this effort, the BNU will be utilised to promote research cooperation and exchanges amongst students of member countries and to provide scholarship opportunities to accomplish the education-related goals of sustainable development.

■ BRICS10

The 10th BRICS summit was held in Johannesburg, South Africa, from 25 to 27 July 2018 under the theme entitled 'BRICS in Africa: Collaboration for inclusive growth and shared prosperity in the

4th Industrial Revolution'. The event was hosted by Mr Cyril Ramaphosa. Key points highlighted during this meeting include the following:

- The BRICS Partnership on New Industrial Revolution (PartNIR) was established.
- Reaffirmation of commitment to the UN principle regarding international law and sustainable development in the 2030 Sustainable Development Goals (SDG) Action Plan.

Following the declaration published by the presidency of the Republic of South Africa (2018) after the 10th BRICS summit, the following milestones were highlighted:

- During the 10th BRICS summit in Johannesburg, BRICS is facing challenges regarding multiculturalism that demand cooperative efforts that are in line with the UN guidelines, and the outcomes of the UN 2005 call to reform have been reiterated.
- It is decided that the quest to implement the UN 2030 Agenda for Sustainable Development should continue towards the final goal of eradicating poverty by the end of the term.
- Member countries undertake the commitment to strengthen cooperation in all BRICS projects, with specific emphasis on energy and economic growth, as well as support towards the BRICS Agricultural Research Platform that was established in 2016 in India. Furthermore, the people are placed central in the BRICS programmes and steady progress is underway in terms of sport, youth, culture and education.
- A people-centred approach is adopted that focusses on the inclusion of all people inside and outside of the BRICS member countries, and the importance of cooperation is stressed in all exchanges, communication and cooperation amongst BRICS countries.
- The BRICS10 also affirms the goals and aims set in preceding BRICS meetings to continue into the future.

■ BRICS and Africa

A report issued by the minister of the Department of International Relations and Cooperation (DIRCO), Lindiwe Sisulu, outlines the following goals set for Africa in the 2063 Agenda, more specifically for South Africa, with regard to Africa's membership in BRICS (DIRCO:2018):

- a flourishing Africa that is based on sustainable development and inclusive growth
- a united continent that is integrated and politically unified from the perspective of pan-Africanism
- good governance, justice, democracy and emphasis on human rights that have to be respected at all costs
- strong cultural identity, shared values and ethics, with a common heritage for all Africans
- people-driven development with attention to the empowerment of the youth and women
- Africa as a competitive global partner with merited influence.

In conclusion, the focus of the BRICS10 summit is sustainable development and cooperation amongst the BRICS member countries to ensure growth to benefit all role-players and the advancement of Africa as a whole.

■ Conclusion

The BRICS organisation was founded in 2006 and the first official summit took place in Russia in 2009. In 2015, the seventh BRICS summit took place. From the above historical overview, the scope of collaboration is evident. Cooperation takes place in several areas. This generally includes finance, agriculture, labour, statistical services, competition, health services, sustainable development, climate change and, in particular, education.

■ The structure and composition of the BRICS organisation

From the above discussion, it can be seen that there were four objectives for education, namely, the strengthening of cooperation

amongst BRICS universities for partnerships and the exchange of knowledge; the conclusion of partnerships and the exchange of knowledge on technical vocational education and training; the promotion of the transferability of educational qualifications and BRICS countries; and the acceleration of the importance of cooperation with UNESCO for the purposes of the EFA objectives. At BRICS7, the objectives were further refined and grouped under four divisions, namely, higher education, vocational education, general education and education policy.

One of the first direct outcomes of BRICSology in education is the constitution of the BNU. Another direct consequence for South Africa is the announcement by the minister of education that the language Mandarin will be offered as additional language as a pilot project in several schools (Republic of South Africa 2018).

As mentioned earlier, the term 'BRIC' was created in 2001 by the then chairman of Goldman Sachs Asset Management, Jim O'Neill, in his publication 'Building Better Global Economic BRICs' (O'Neill 2001). The foreign ministers of the initial four BRIC countries held their first informal meeting in New York at the UN General Assembly in September 2006. In 2010, South Africa became part of BRIC and the acronym was changed to BRICS.

BRICS therefore consists of five member states, namely, Brazil, Russia, India, China and South Africa. O'Neill (2001) referred to these countries as countries that are neither developed nor developing. This group of countries fits between these two groups, and the term 'emerging economies' is often used to indicate them. With the focus on the composition of BRICS, the member states are equal partners and can participate democratically and without prejudice in all the meetings and discussions (BRICS5 2013b). The BRICS member states are led by their respective heads of state. Furthermore, the authority is diverted to the ministers and heads of state institutions, such as the statistical services. Next, relevant information about each member state is given.

■ Brazil

Brazil covers an area of 8 515 000 km² and is geographically the largest country in South America and the fifth largest in the world. The population was 201 million in 2013, and Brasília is the capital. Brazil is a federal republic, and in 2016, the head of state was Michel Temer. Brazil is also the world's largest producer of sugar, oranges and coffee, producing 35% of the world's coffee (IBGE 2016). The GDP in 2013 was \$2.246 trillion and the per capita GDP is \$11 208. The average life expectancy of the residents is 73 years. The unemployment rate as a percentage of the total population is 4.8% (World Bank 2016a). The learner-to-teacher ratio in primary education is 21:1.

■ Russian Federation

The Russian Federation is the largest country in the world and spans 10 time zones. It covers an area of 17 125 000 km². It is almost twice as big as the world's second largest country, Canada. The population stands at 145 842 000 people, and the capital is Moscow. The head of state is President Vladimir Putin (2016), and the country has a democratic federal government (Federal State of Statistics Service 2016). Russia's GDP is \$1.861 trillion a year and the per capita GDP is \$12 735. The World Bank (2016c) calculated the life expectancy of Russian citizens to be over 71 years. Russia's unemployment rate is 5.1% of the total population. The average learner-to-teacher ratio in primary education is 20:1 (World Bank 2016e).

■ India

There are 1 252 000 000 people living in India (at the time of writing). This is about 17% of the total population of the world. The total area of India is 3.287 million km². It is one of the most populous countries in the world, with 380 people per square kilometre. The capital is New Delhi. The population of India's largest cities put together, namely, Mumbai, Kolkata, New Delhi and Chennai, is almost on par with the total population of South Africa. The head of state, until 2017, was President Pranab

Mukherjee, and India is a parliamentary republic. India had more than 150 000 post offices, making its mail system the largest in the world, and with its million-strong workforce, Indian Railways was the largest employer in the country (Republic of India 2016).

India's GDP was \$2.049 trillion and the per capita GDP was \$1688 (World Bank 2016b). The average life expectancy of the citizens of India was 68.45 years (Geoba 2016). The unemployment rate was 3.6% of the total population (World Bank 2016b), and the average learner-to-teacher ratio in primary education was 35:1.

■ China

For centuries, China has led the world in scientific thinking and new inventions. They were the inventors of the compass, gunpowder, porcelain, paper and printing, and they also mastered the related processing. China is home to one of the seven wonders of the ancient world – the Great Wall of China; it is the largest preserved architectural monument in history and has been preserved since ancient times. China covers an area of 9.597 million km², and in 2013, the population was 1.357 billion people. The capital is Beijing, and the head of state, President Xi Jinping (2016), heads a socialist (communist) republic (BRICS 2015). In 2014, China's GDP was \$10.354 trillion, and the per capita GDP was \$7590 (World Bank 2016d). The average life expectancy of citizens is 75 years. China's unemployment rate as a percentage of the total population is 4.7%. The learner-to-teacher ratio in primary education is 17:1.

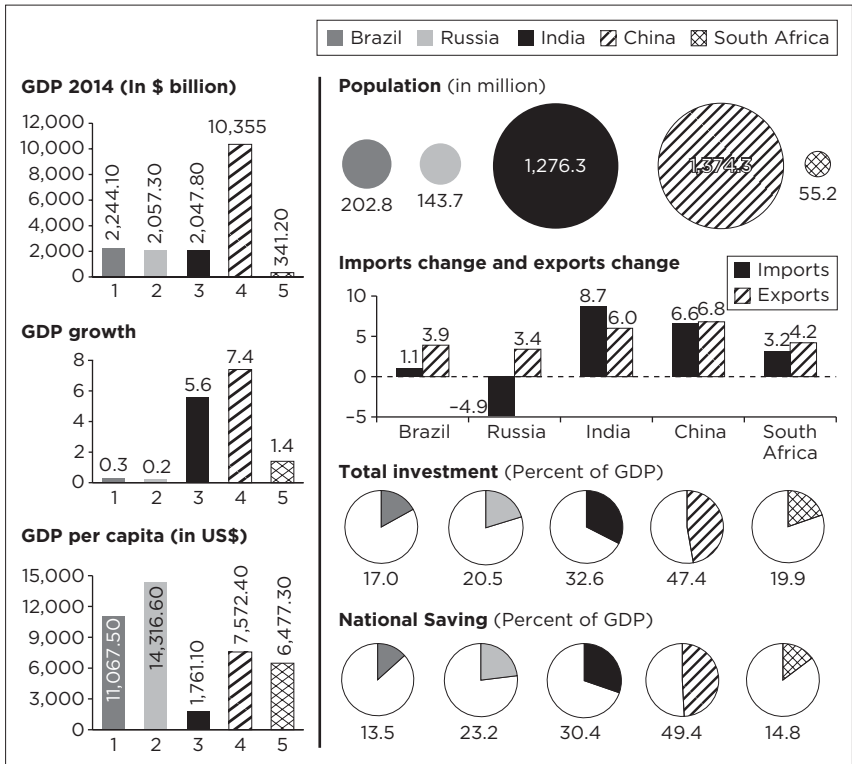
■ South Africa

According to Statistics South Africa (2016), the population of South Africa was 54.94 million in 2015. Furthermore, in 2014, the GDP was \$350.09bn, and the per capita GDP was \$6086.45. South Africa covers an area of 1.221 million km². Politically speaking, the country has a constitutional democracy and the head of state in 2016 was Jacob Gedleyihlekisa Zuma. The World Bank (2016d)

gives the average life expectancy of citizens in South Africa in 2013 as over 57 years. South Africa has the highest unemployment rate, compared to the other BRICS member states, namely, 25.5% of the total population. Another worrying statistic is the high learner-to-teacher ratio of 32:1.

Conclusion

The BRICS diagram (2015) in Figure 3.1 gives a more comprehensive picture of the economic power and influence the BRICS countries have on the total world population. BRICS covers a total of 26%, almost a quarter, of the earth's surface.



Source: World Bank (2016d).

FIGURE 3.1: BRICS economic summary.

The population of the BRICS member states constitutes 42% of the total world population. This means that 4.2 people out of every 10 people in the world live in the BRICS member states. Furthermore, these countries contribute 27% to the world's GDP - almost a third of the world's GDP. Schwartzman, Pinheiro and Pillay (2015) described these countries as very different from one another but sharing many features that justify the attention they receive. The BRICS member states enjoy a very high regional influence but are also going through the same transformation processes, as they are modernising their own communities. Education plays an important role in this transformation.

■ Characteristics of organisations

An organisation is a framework within which human activities are directed and coordinated to achieve an agreed core goal (Basson, Van der Westhuizen & Niemann 1995:583). Theron (2013:81) confirmed this through his definition of organisations as formal structures in which people stand in a specific relationship towards one another in order to achieve particular goals. Pharos (2016) simply defined an organisation as the way something is organised or a group that acts as an organised body. An organisation can also be defined as a group or groups of people who are hierarchically structured and work together to achieve particular goals within a specified time and budget. Theron (1992:5) described the characteristics of an organisation as follows:

- It has a specific composition and structure.
- It consists of more than one person with prescribed and differentiated tasks.
- It is constituted to achieve particular goals and objectives.
- It is managed for the purpose of achieving goals.
- It is exposed to external influences.
- It is characterised by coordinated activities.
- It is characterised by collective activities.

BRICS meets the definition and characteristics of an organisation. BRICS is, however, an international mega-organisation. It has a specific composition and structure, and it consists of five member states. BRICS is still in its infancy but some goals have already been declared and some of the goals have been achieved, such as the New World Bank.

External influences changed the BRICS goals, such as the global economic crisis in 2009 and again in 2016 when oil prices fell to record lows. Activities are coordinated, as can be seen from the annual BRICS summit. The BRICS member states can also collectively withdraw or withdraw from cooperation at all levels. BRICS thus complies with the definition of an organisation: BRICS consists of groups of people who work together to achieve particular goals and objectives collectively within specific timeframes and budgets.

■ The functioning of organisations

Bohning (1999) summarised the functions of an international organisation as follows:

- It is about studying or collecting and disseminating relevant information.
- Internationally acceptable norms must be set for functioning.
- Collaboration should be nurtured during and through meetings.
- Lastly, activities of technical collaboration should be promoted.

Encyclopaedia Britannica (2016) referred to the lending features of international organisations. These features may include:

- Rendering services and assistance, such as WHO.
- Collecting information and monitoring trends, such as UNESCO.
- Providing bargaining forums (UN).
- Resolving disputes (WTO).

■ Conclusion

The scope of the BRICS organisation is significant as has clearly been shown in the historical description in the section on 'The historical development and nature of the BRICS organisation'. From the first official summit in 2009 to the summit in Russia in 2015, the scope of BRICS has increased exponentially. One example of the collection and dissemination of information is the cooperation of the statistical services of the various countries. The BRICS Academic Forum is an example of a bargaining forum focusing on education. Furthermore, in the field of finance, the BRICS Development Bank (also called the NDB) is an example of how international collaborative organisations (such as BRICS) and their functionaries can work together to form something new. BRICS has its own dynamics, and its features are increasing. As such, BRICS is referred to as a mega-international organisation.

■ Summary

The BRICS organisation has evolved from initial investment talks to a formal network. This network (BRICS) wants to benefit from the collective collaboration in the group. This cooperation has also led BRICS to play a greater geopolitical role. One of the initial goals was the reform of organisations such as the IMF and the UN, in line with the new workforce. Recent developments in BRICS have led to the establishment of the NDB. Eleven BRICS summits have been held. While in 2009, it was just exploratory, BRICS has now expanded to a full-fledged cooperative organisation, working in various fields. The organisation grows exponentially, and some of the outcomes can be seen practically. As mentioned above, Mandarin is already offered as additional language in South African schools. The BRICS Bank is also an example of financial cooperation. Initial educational objectives were established in 2013 and further refined during BRICS7 in Russia. BRICS has significant potential to make a difference at the international level. The population, land area and GDP of these countries already have a geopolitical influence, and this is just growing stronger.

Conceptualising educational aims

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■ Introduction

In her address at a recently held graduation ceremony at Nelson Mandela Metropolitan University, the chancellor (Mbalela 2019) asked the jubilant new graduates:

What will you do with your education from Nelson Mandela University to change the world? – for your family, your community, your profession, your country? What contribution will you make towards Africa’s growth and development that leads to a better life for all? (p. 34)

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With this question, the chancellor challenged the students to enter the world and change it, doing their part to promote democracy, equality and justice in whatever career or profession they will pursue (Mbalela 2019:34). The chancellor (Mbalela 2019) continued:

It is up to you to ask yourself this same question; to commit to strengthening democracy, equality and justice in whichever life path you pursue; to continue making difficult things happen; including, and, very importantly, to make sure that you play your part in making society a safe space for women and men in this era of intolerable gender violence that we are seeing on our campuses and in our society ... We are all aware of the rising cynicism about democracy and equality, but the achievement of a more equal society is not lost. You are the new leaders [...] and it is in your hands to respond to this challenge and rethink how each of you, with your fine qualifications, can play your part in reshaping society for the better, changing negative mindsets, confronting fear, boldly embracing life beyond university, dreaming audacious dreams. (p. 34)

Since the mid-20th century, education has staked claim on a substantial part of the budgets of governments and private households alike. In most countries in the world, education represents the largest single item of government expenditure. In the beginning years of post-independent Africa, education amounted to a quarter to a third (in some instances even more) of government budgets.

Surely, such a concentrated allocation of financial assets must be in pursuit of something. In his seminal book, *Beknopte Theoretische Pedagogiek*, Langeveld (1943) explained that education is no incidental event but is created by society in order to serve particular ends or aims and objectives. The aims are that which the creators of an education system are striving to achieve by means of the education system. The aims are of pivotal importance to any education system – from the global education system to a national education system, down to individual schools and classrooms. However, in spite of this pivotal importance, the theme of the aims of education has never taken centre stage in scholarly investigations of education. Surveys of the topics of research in fields such as comparative and international education

(cf. Wolhuter 2008), the history of education (cf. Depaepe & Simon 1996; Wolhuter 1996a) and higher education (cf. Wolhuter 2014) invariably show a lack of attention to the topic of the aims of education. However, contemplating and reflecting on the aims of education in society is essential in order to determine where the education project is heading, to assess whether the education system is on track, and to determine whether and which corrective action is needed. By having a discourse about the aims of education, nations can learn a lot from one another, which is, after all, one of the accepted purposes of comparative education research. Similarly, in any education cooperation project among countries, clarity should exist regarding the aims of education. This book focusses on education in the BRICS countries and, by its nature, will be a comparative study and will also turn its attention to scope with respect to cooperation in education among the BRICS countries. Educational aims would then be a centrepiece in such a study. A comparison of this nature would require a common theoretical edifice, and the purpose of this chapter is to give a theoretical exposé on the topic of educational aims.

A great variety of views exist as to what the aims of education should be. These views will be described in this chapter. It is by selecting (with their structures of decision-making) one or a combination of aims in a particular order or proportion that the planners or designers of an education system (or a school principal, as far as his or her authority allows) are steering an education system or a school in a particular direction. It is intended that this chapter will assist the school leader or future school leader to make an informed decision with regard to this very critical element of the education system he or she is leading.

Biesta (2013:4) was of the view that the question ‘Why do we want an education system?’ can be answered using three basic arguments, namely:

- to teach the learner particular skills
- to offer maximum opportunities for each individual learner, in other words, to individualise

- to socialise, in other words, to teach the learner to adapt to and fit into society.

These three basic points of view regarding the aims of education will now be discussed in turn, followed by a number of refinements or extensions of each one.

■ Skills or a body of knowledge as goal

■ Vocational and technical education

That education should teach a set of useful or valuable skills has been proposed by many theoreticians of education and has been the motivation behind many major drives of education reform in the past century. It was in the wake of the growing schooled unemployment of the late 1960s, and especially the 1970s, that interest in vocational education grew in the Western world, in the belief that the youth were unemployed because they lacked skills in demand in the labour market (Husen 1979:155, 156). In Africa, this argument was waged by, for example, Thomas Balogh and René Dumont. In the United States of America (USA), the administration of President Nixon lodged a major drive in the 1970s to promote career education. Nixon appointed Sidney P. Marland, who got the nickname ‘the father of career education’, as the head of a large bureaucracy with the purpose of promoting career education.

The exercise of vocational and technical education ran into a number of problems. Economists point to the problem that it is impossible to predict human resource needs accurately, more so in the fast-changing world of today (Dostal 1989:48). Many occupations existing today were unknown only a generation ago (e.g. information technology technicians and programmers). Another fundamental problem is the assumption that the occupation–education coefficient will remain constant (Berkhout 1989:14). The long tradition of the input–output (‘black box’) model, by means of which economists studied education, to the neglect of internal factors and dynamics in the school environment,

means that knowledge regarding the relation between, for example, school curricula and methods of teaching and learning, on the one hand, and educational outcomes (occupational outcomes in particular), on the other, is grossly inadequate (cf. Wolhuter 2008). The school can, therefore, not without a substantial hit-and-miss chance, be used to attain a particular occupation-related goal. It is extremely difficult to interpret the widely divergent (and fast-changing) industrial and technical requirements within educational qualifications and curricula (Berkhout 1989:18).

Furthermore, there is the objection that inter-occupational mobility increases as the level of general education increases (Husen 1979:160), strengthening the case against vocational education. In this regard, Bantock (1970:11) contended that the current gamut of so-called academic subjects gained their foothold in educational institutions during the course of a long history, simply because they have proved to be the most economical way to logically order and unlock the mass of undifferentiated phenomena in nature and in society.

The 'Asian Tigers' (Japan, Taiwan, Singapore and South Korea) are often cited as examples of vocational and technical education resulting in economic growth and prosperity, yet vocational and technical education was established in these countries within a very particular context (cf. Erasmus et al. 2002). Attempts to export the Taiwanese system of vocational and technical education to India have ended in failure; it could not ignite the same economic growth as in Taiwan (Dostal 1989:44).

The German system of dual education and training (*duale Ausbildung*) has had a long, successful run in Germany and Switzerland, and has always been taken as an example in comparative and international education literature of a system that manages to successfully align the world of education with the world of work (cf. Wolhuter 2003). Yet, two provisos should immediately be added here. Firstly, while the *duale Ausbildung* system (may) have worked well in Germany and Switzerland,

it travels less well – the many attempts to export the model to other countries across the globe, including large-scale reforms (here the SENAI system of Brazil comes to mind as an example), all (apart from Norway and the possible partial exception of Singapore) ended in failure, owing to societal contextual factors in these other countries (cf. Wolhuter 2003). Secondly, even in Germany, by the beginning of the 21st century, the system began to run into difficulties, related to the problems of vocational education outlined above (cf. Wolhuter 2003). The education system of the erstwhile USSR (1917–1991), the most salient example of a national education system premised on vocational education, ended in spectacular failure in securing economic growth and prosperity (cf. Wolhuter 1996b).

In the developing world, there is the (in comparative and international education literature) classic book chapter (1965) of renowned comparativist Philip Foster (1928–2007) (who was the leading authority in the field of education in post-independence Ghana), which cast a very negative verdict on the prospects of vocational education in developing countries, *inter alia*, by showing that the rates of return of academic education exceed those of vocational schooling. After Foster's passing, Lauglo (2010) published a review of developments and literature regarding vocational education. While being a more nuanced and balanced survey than that of Foster, Lauglo (2010) still presented a predominantly negative view of the success record of vocational education.

Finally, the 2019 *World Bank Report on the Changing Nature of Work* cast a dark verdict on the future of vocational education. The World Bank (2019) predicted that in the 21st-century, machines and robots will increasingly take over work and jobs from humans. Technological progress will, furthermore, constantly open up opportunities for new jobs. While still recommending to governments the development of human capital as the best strategy to equip its populace for this new world, the World Bank cautioned that this cannot amount to simple prescriptive solutions – these new jobs will not be a matter of task and routine.

Innovation will be the key word. A premium should be placed on general cognitive skills, such as creative thinking and critical thinking, and socio-behavioural skills, such as recognising and managing emotions that enhance teamwork.

To summarise, aligning the world of education to the world of work has proven to be a Gordian knot in education (cf. Down, Smyth & Robinson 2018), which no national education system could succeed in getting untied, even less so in modern times of complicated society and advanced economies. But what is certain is that a narrow vocational education has proven not to be the answer, and will be even less so in the unfolding 21st century. But apart from all of these, to make training for work the sole objective of education is to reduce the human being to a unit of production and consumption – an objectionably narrow, even inhuman, view of humanity and of education.

Apart from vocational and technical education, there are other instances of education systems orientated around skills or learning content outcomes. Three examples of an education creed orientated around skills or knowledge judged to be valuable are Bloom's educational objectives, the South African experiment with Outcomes-based Education (OBE) and perennialism. The last two will be discussed in the next two sections.

■ **The South African experiment with outcomes-based education**

In the pre-1994 era, the South African education system was frequently criticised as being too content-based, too Eurocentric and too ideologically driven, and therefore too authoritarian, emphasising rote learning to the detriment of fostering independent thought, self-reliance and the developing of learners' capabilities (cf. Christie 1991:174; Nasson & Samuel 1990:155). In the context of the post-1994 society and education system, policymakers felt a need to nurture individuals with critical thinking and problem-solving abilities, to provide individuals

with opportunities to develop their potential to the full and to create an education system that would equip learners with skills necessary to contribute to the development of the country (cf. Van der Horst & McDonald 1997:5; Wolhuter 1999:366). Consequently, the change from content-based education to OBE was effected at the beginning of 1998.

The introduction of OBE into South African schools signified a momentous change in South African education. From the outset, OBE had its advocates (based on the arguments outlined in the previous paragraph); however, its critics argued their case with as much fervour as the advocates of this pedagogy. One of the most public criticisms from academics came in the form of a national conference on the topic convened in May 1997 by the Faculty of Education at the University of Durban-Westville (Jansen 1999a:12). At this conference, prominent educationist Jonathan Jansen read a paper titled, 'Why OBE will fail' (Jansen 1999b:145-154). Unexpectedly, the paper generated a considerable controversy across the country and became the focal point for an extended debate on Curriculum 2005 and OBE at universities, provincial education departments, among non-governmental organisations, workshops, conferences and seminars (Jansen 1999a:10). (For a summary of the reasons why critics believed that OBE was bound to fail in the South African context, see Warnich and Wolhuter [2010: 63-124].) De Wet and Wolhuter (2007) argued that, in introducing OBE, the South African government blindly followed its own beliefs and ignored a substantial body of evidence of the failure of OBE after having had a trial run in a number of countries.

After some time, OBE in South Africa was given a negative verdict. When the first cohort of learners who underwent OBE wrote their matriculation examination at the end of 2008, the pass rate dropped significantly compared to 2007 (Wolhuter 2011). In addition, the National Benchmark Test Project found that those matriculants who did pass and made it to university in 2009 were poorly prepared for university study (McGregor 2009).

So eventually, after 13 years, the curriculum that put OBE in place was aborted and replaced by a new curriculum.

■ Perennialism or essentialism

Theoreticians of education subscribing to the philosophy of perennialism or essentialism believe there is a classic canon of knowledge, with its core in the humanities, which should be the staple of education. According to protagonists of perennialism or essentialism, these classical studies continue to be of relevance today. This body of literature is of perennial value in equipping learners to deal with the universal (pertaining to all places and at all times) questions of life, society and the world. These theoreticians also often emphasise character formation as the aim of education. Advocates of this educational philosophy are Robert Maynard Hutchins, who developed the Great Books Programme in 1963, and Mortimer Adler, who further developed this curriculum based on 100 great books of Western civilisation. Two influential books by protagonists of this line of thought are Alan Bloom's *The Western canon: The books and school of the ages* (1995) and Harold Bloom's (no relation to Alan Bloom) *The closing of the American mind: How higher education has failed democracy and impoverished the soul of today's students* (1987).

This philosophy regarding the objectives of education found a strong foothold in (especially the higher) education systems of the world, with the liberal education idea that found embodiment in the Oxbridge Universities at the apex of the British higher education system, from where it was exported to the colonies and the rest of the Anglophone world (the Liberal Arts Colleges in the USA, for example, comes to mind here) and even beyond. One problem with this conceptualisation of the aims (and by implication the content too) of education is that what is regarded as the classic canon has its origin in the Global North, if not in Europe. Also, in an age where calls are made for the decolonisation of education and the termination of the Northern hegemony, propounders of this view of education will have to face a strong

challenge from those calling for the Global South to take its rightful place in the world of education.

■ Societal goals

■ Socialisation

Whereas the above first set of views on the objectives of education holds up particular skills or a body of knowledge as the goal of education, advocates of the second set of objectives proclaim that societal aims (i.e. pertaining to society) should be the goal of education. These advocates of an education tied to societal goals can be divided into two major groups: those who ascribe to education a socialising mission, in other words, education should socialise the learner into the present, existing society; and secondly, theoreticians of societal reconstruction, that is, those criticising society in its present forms and who want to create a new type of society.

Turning to the first type, many of the main philosophers of education held that the sole purpose of education is to teach the child to function fully in society. Among these philosophers of education count Herbert Spencer (1820–1903) (cf. Duggan 1916:274) and John Dewey (1859–1952) (cf. Duggan 1916:312). The strongest paradigm in the field of comparative and international education is the ‘factors and forces theory’, the basic thesis of which is that education systems reflect societal forces (cf. Wolhuter 2008:342) and therefore function to realise societal objectives. Furthermore, the two most widely accepted theories as to why schools were originally created in society, namely, those of Gray and Cohen (these two theories are explained in the next paragraphs), fit into this category. Hence, the view that the school does and should primarily serve societal goals is very pervasive.

The best available evidence about schools indicates that schools appeared for the first time in history in Egypt and Mesopotamia around 3000 BC, for the training of scribes, not

long after the invention of writing (Bowen 1982:8). Archaeological excavations found a large amount of school clay tablets, dating from around 2500 BC (i.e. also in the middle of the third millennium BC). The earliest probable school classroom excavated dates from approximately 2000 BC. This classroom was located in a palace at Mari, near the river Euphrates; in two rooms, many rows of desks made by raw bricks were discovered, each of them apt to host from one to four pupils (Roaf 1995). During the third millennium BC, education was the exclusive privilege of priests and of scribes of the priests and scribes of the palace.

Hitherto few researchers have attempted to document, much less to explain the origins of the first schools, but if impact statistics are considered, the two theories on the origin of schools attracting the largest following are those of Cohen and of Gray. According to the explanation offered by anthropologist Yehudi Cohen (1970), schools emerged for the first time in human history in what he calls 'civilisation states', which he defined as states having been constituted from the merger of smaller political entities. In such states, such as ancient Egypt, Mesopotamia, China and Athens, it was necessary to train a tiny elite and accompanying bureaucracy to keep the state running. Among these elite groups, local loyalties towards smaller political, geographical and social units had to be suppressed and be replaced by loyalties towards the new, overarching state. For this purpose, schools were called into being.

Cohen (1970) explained the establishment of public national systems of mass (primary) education since the 19th century (first in Western Europe and North America, later followed in the rest of the world) from the same rationale as that which took place in the ancient civilisation states. Rulers of the newly formed nation-states, created from the myriad of smaller feudal entities, had to cultivate loyalty towards the new state and a common culture, and schools came to be seen as the means thereto. As this Western European school model was exported to the rest of the world, in the form of colonial education, it too served the purpose of stifling indigenous cultures and of foisting down the culture of

the colonial masters, that is, of the metropolis in Europe (e.g. cf. Haldane 2012).

The role of the school, in other words, an institution of universal, compulsory education, as one of the means employed by the state to accomplish objectives it regards as desirable, can be found tied to modern-day literature (e.g. Hartshorne 1989:103) and cultural rationalisation (which puts forth this explanation for the existence of schools), and is one of the main paradigms in the scholarly field of comparative education (e.g. Welch 1991).

While Cohen (1970) tabled a political motive for the emergence of schools as institutions, Gray (2013) put forth an economic rationale for schools. According to Gray, the centuries after the agricultural revolution have called for a new kind of person. In a hunting and gathering economy, each person could hunt and gather at his or her own time. An agricultural economy, however, calls for a disciplined worker and, accordingly, schools were established in order to suppress the own volition and freedom instinct and to replace these with a submissive, externally controlled and driven worker who subjects him- or herself to the prescriptions of society and its structures of power and authority.

Both Cohen (1970) and Gray (2013) explained the appearance of schools as institutions that serve as instruments to socialise people into a dominant culture or style of life. To whichever of these explanations credence is lent (probably both contain some part of the whole truth of the reason for the creation of schools), in the second half of the 20th century, a limitless belief in the school as a power to shape society developed. This will be described in the next section on the aims of education formulated as to bring about change in society. However, it has to be stated that any such societal aims (be it socialisation or social reconstruction) are an overestimation of the power of education. That these expectations were over-optimistic has been borne out by research. For example, in a much-cited, classic comparative study, Almond and Verba (1963), based on a massive survey in five countries (the USA, Mexico, Britain, Germany and Italy), it

was found that there is indeed a strong correlation between the political consciousness of people and their level of education. However, formal education systems cannot easily determine the kind or direction of political beliefs; powerful forces shaping political beliefs of people include contextual factors, historical factors and the influence from the family.

■ Moral education as a goal

Some theoreticians of the societal goal camp narrow down the goal to moral education. Prominent thinkers about education in this group include Eduard Spranger (1882-1963), Friedrich Wilhelm Foerster (1869-1966), Ph. A. Kohnstamm (1851-1951) and Jan Waterink (1890-1966). Comparing ancient Greek and Roman education, societies and cultures with the education, culture and society of ancient Israel, historian of education Castle (1961) singled out moral education as the main aspect of education determining whether societies and cultures survive or die out and go extinct.

In view of a number of issues in the world of today, the importance of moral education remains topical. The diversity of value systems in societies and in the world today makes Dalin and Rust's (1996) caution that some basic common set of values is necessary to ensure peaceful coexistence, and for the same reason, Fukuyama (1999) wrote about the need for social capital in the world. De Klerk-Luttig (2016:11) wrote the following on the determining factor of the success of nations:

- It is not the age of a nation that determines its success: Egypt and India are much older than the USA, Canada, Australia or New Zealand, but much less affluent.
- It is also not endowment with natural resources that determines success: Japan has no mineral deposits and has had to import all raw minerals (coal, iron and the like) for its industries; no cocoa can be grown in Switzerland, but Switzerland manufactures the best chocolates in the world.

The difference between successful nations and failures is, according to De Klerk-Luttigh (2016:11), the existence of a set of core values, including honesty, ethics, integrity, accountability, diligence and commitment, respect for laws and regulations, parsimoniousness and punctuality.

■ Societal reconstructionism

Whereas all of the above views want to stabilise society (in its present form) by means of society, a second group of theoreticians of education, which privileges societal goals, is dissatisfied with society and wishes to construct a new society by means of education. These societal reconstructionists come in different shades.

The American theoretician of education George Counts (1889–1974) is usually regarded as the trailblazer of social reconstructionism in education. In his book *Dare schools build a new social order* (Counts 1932), he set out his views of how education in schools should rectify what he regarded as wrong in society, and thus create a new society. Also widely hailed as a pioneer of the idea of social reconstructionism in education is Theodore Brameld (1904–1987). He founded his ideas in response to the realities of World War II. He feared the potential of human annihilation through technology and human cruelty, and recognised the capacity to create a beneficent society by means of technology and human compassion, through education.

However, in the decades after World War II, and especially in the 1960s, a widespread belief in the omnipotence of education to effect desired societal changes developed. Brezinka (1981:2) described it as follows ‘[w]hen someone wants to do something for peace, he introduces “peace education”, the person wanting to reduce the number of traffic accidents recommends “traffic education”’.

For example, the earth is facing a population explosion, which many scholars of society single out as one of the most urgent

challenges facing humanity (e.g. Friedman 2009). Since the second half of the 20th century, education is viewed as a means to control population growth – the argument put forth is that educated families tend to have fewer children (e.g. cf. Idenburg 1971; Sen 1999:218; Todaro & Smith 2012:293, 296).

Very important in this collection of beliefs regarding the societal transformative power of education has been the modernisation theory, becoming in vogue in these post-World War II decades, when the international political scene was characterised by a large number of nations of the Global South attaining independence and joining the international community of nations, and a pressing need was felt to develop or to modernise these countries. The international community believed that the problem of these countries was to make the transition from a traditional to a modern society, that is, the task was to modernise. Sociologists believed that modernisation is a psychic-social process, whereby society is modernised as the people learn new attitudes, beliefs and values (Fägerlind & Saha 1984:93). According to the modernisation theory, the modern human being displays the following traits (Fägerlind & Saha 1984:95):

- an openness for new experience and a readiness for social change
- an awareness of the diversity of attitudes and opinions
- being energetic in the acquisition of facts and information on which opinions are based
- a time orientation towards the present and future rather than towards the past
- a philosophy that humans can control and influence their environment
- a high premium is paid on the value of formal education
- respect for the human rights of others
- an understanding of the logic underlying industry and production
- universalism: a belief in the equality of people regardless of age, gender and so forth
- optimism: not being dominated by feelings of fatalism.

Advocates of the modernisation theory put forth education as the most important instrument for effecting the transformation from a traditional society to a modern society (Fägerlind & Saha 1984:49).

A theory related to the modernisation theory is the human capital theory. This theory was originally formulated by Theodor Schultz (1961) in his 1960 Presidential Address to the American Association of Economists. Schultz, who was eventually awarded the Nobel Prize for Economics in 1979 for this theory, viewed education as a production factor (after it has, for centuries, been regarded as a consumption item): knowledge and skills result in higher productivity, in other words, economic growth. This theory led to a revolution in economic thought (cf. Sobel 1982). The voluminous literature of the World Bank on education is cast in the theory of human capital, for example, the World Bank's 1988 seminal report on education expansion and reform in sub-Saharan Africa (cf. World Bank 1988) motivated reform and expansion of education in sub-Saharan Africa on the basis of the economic growth dividends of education.

In the 20th century, instances of radical change of political dispensations occurred, where new governments deliberately used education to construct a new society. A day after the October Revolution in Russia in 1917, Lenin appointed his wife, N.P. Krupskaya (a scholar of comparative education by profession), as the minister of education; for the first time in history, Russia had a minister of education. She created a national education system with the aim to nurture a Soviet citizen, to build a new socialist society. Similarly, after taking over the Government of Cuba in 1959, Castro created an education system, the goal of which, likewise, was to build a new socialist society. Likewise, the intention of Nyerere's education system, 'Education for Self-Reliance', established in 1967, was to establish a new society (cf. Wolhuter 2004).

Paolo Freire's (1921-1997) liberation pedagogics has attracted the attention and admiration of many. Freire, known for his work

among the poor non-literates of South America, set out his ideas in his books such as *Pedagogy of the oppressed* (Freire 1972). According to Freire, the oppressed and the downtrodden need to liberate themselves. Through education and alphabetisation, they can arrive at a critical understanding of their own situation and create a new situation through transformative action.

Whereas social reconstructionism philosophies and exercises such as those outlined above all have blueprints of new societal orders, another group of philosophers of education – closely aligned with philosophical ideas of existentialism – eschewed predetermined plans of society. Philosopher Hannah Arendt (1977) took the extreme position of calling for education and politics to be divorced totally. She had a moral problem with ruling powers using schools to shape society. In an existential mode, she alleged that such a use of schools would deny the upcoming generation the freedom to shape and to build society as they judge to be good. Maxine Greene, also a very close follower of existentialism and also very much against the mechanistic use of schooling to achieve pre-set social goals, emphasised the social dimensions of freedom, releasing the imagination and allowing creativity to flourish in art education, thereby stimulating a new social vision.

In conclusion, it should also be added here that, as in the case of socialisation, history advises against any high expectations as to the power of education to change society in a particular direction or to successfully effect the desired social engineering. Renowned scholar of education Michael Apple argued in his book *Can education change society?* (Apple 2013) that social change cannot be effected by the education system as lever; change should be effected in society itself. In comparative and international education, a whole range of paradigms emerged in the 1970s, collectively known as the ‘reproduction theories’. The common thesis of all these paradigms is that, rather than acting as an agent changing society, education serves to reinforce and reproduce society and its structural features (cf. Wolhuter 2007).

■ **Emphasis on the individual or educand**

A final set of views on the goals of education revolves around the individual learner or educand. Within this group, the exact emphasis differs. A first section places the emphasis on individual excellence, creating space or opportunity for every individual to fully realise his or her potential. Such thinkers may draw on the need for self-actualisation, figuring very prominently in psychologist Abraham Maslow's theory of human needs, or on the highly competitive nature of modern globalised economies, requiring the talents of each person being maximally developed.

Closely related to these thinkers may be the thinkers who contend that education should give each educand maximum scope for individual creativity to flourish. They motivate their case from, *inter alia*, the need of knowledge economies in the modern world, or as Richard Florida explained the value of a class of creative people in today's society in his book *The rise of the creative class: And how it's transforming work, leisure, community and everyday life* (Florida 2002).

Privileging the individual educand in formulating educational objectives chimes in with a very salient trend in modern society, namely, individualisation. Customer-tailored manufacturing, individual access to a wide range of information, the breakdown of state control and the rise of the Creed of Human Rights are all conducive to individualisation, which raises the importance of the individual (Steyn & Wolhuter 2020). The business sector, by means of the advertising industry, contributes towards this feeling of self-importance among individuals, as is masterfully depicted in the much-spoken-about 2002 British Broadcasting Corporation documentary *The century of the self*, which was viewed by millions all over the globe. During the past few decades, the explosion in the availability of compact discs, walkmans, videos, customisation, the Internet, Facebook and the like has contributed to a growing sense of self-centredness, as each individual is now able to make his or her own choices without consulting others (Steyn & Wolhuter 2020).

A conceptualisation of educational views predicated on the individual finds its philosophical superstructure in a theory such as the capabilities theory, a very popular modern-day theory or philosophy. The capabilities approach is a philosophy, the major protagonists of which are Martha Nussbaum (2000) and Amartya Sen (1999, 2010). It is a philosophy emphasising individual emancipation. The concept of capability within this philosophy (Potgieter, Van der Walt & Wolhuter 2016):

[/]s not the narrow understanding associated with skills such as numeracy or literacy. Capabilities are defined as the functions, opportunities and freedoms people possess to pursue goals they value and to bring about change that is meaningful to them. (pp. 25-26)

Scholars of comparative and international education often optimistically grasp at the capabilities approach as offering an alternative (e.g. Phillips & Schweisfurth 2014:90-91; Rizvi & Lingard 2010:149). While they eulogise the capabilities approach as a counter-philosophy, the education-wise operationalisation thereof, in other words, how it can find embodiment in teaching-learning strategies in classrooms and lecture halls, has not been worked out.

Another variation, moving in the direction of the societal goals, is the view that education should guide the child to moral autonomy or self-decision in the world. This is the view that was expounded by the education scholar M.J. Langeveld (1905-1989) of the University of Utrecht in the Netherlands in his book *Beknopte theoretische paedagogiek* (Langeveld 1943). For decades, this book was studied by student teachers in the Netherlands (De Rooy 2014:245). This view chimes in with post-World War II European values of freedom and the existential philosophy of Sartre, Jaspers and Heidegger rising to prominence.

The high value attached to the individual and his or her freedom has resulted in extreme views as to the role of schools in society. Ivan Illich (1926-2002), in his book *Deschooling society* (Illich 1971), offered a scathing criticism of the school. According to Illich, the school sends across the message that it is dangerous

for people to think for themselves and to explore and to create knowledge by themselves. The school teaches people to rely on others for knowledge, and thus the school undermines the development of independence and fosters a welfare-dependent mentality. The school as institution should be abolished.

■ Conclusion

This chapter portrayed the wide diversity of answers to the question: What are schools for? There is no clear-cut apparent answer to this pivotal question – pivotal as an entire national education system will be built upon the answer to this question. The best that can be stated is that, firstly, schools probably have to serve a multitude of functions in any modern society – functions that can be categorised around both individual, and societal and outcomes-specific imperatives. The specific combination will range from one national context to the next. Secondly, each of the three categories of aims is problematic, not easy to attain. Thirdly, in striving to gain clarity on educational objectives, international comparative exercises can serve policymakers and the public discourse well. It is from this last statement that the rationale of this book stems. The discourse as to the objectives of education in South Africa can benefit from elucidation of the experience of other BRICS countries, the BRICS countries serving as an appropriate, even ideal, comparative datum line or *tertium comparationis* for South African education.

The BRICS organisation and the Education for All goals

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■ Introduction

One of the educational objectives of BRICS is 'Education for All'. This objective along with the quality of education is essential for all member states in order to achieve progress and innovation. To that end, this chapter provides detailed description of the progress of the BRICS member states towards the EFA goals. The guidelines for EFA, which aim to accelerate the achievement of EFA goals in the BRICS member states, are explored. It is important to note that EFA is a global initiative led by UNESCO.

The importance of research and collaboration in terms of EFA goal achievement in general and BRICS EFA goal achievement in particular is highlighted by the *Global Education Monitoring Report* (UNESCO 2016b). The UNESCO report highlights the urgency of research on EFA goal achievement, with pre-estimations on the following EFA outcomes to be achieved by 2030 (UNESCO 2016b):

- Universal primary education will only be reached by 2042.
- Universal lower secondary education will only be reached by 2059.
- Universal higher secondary education will only be reached by 2084.
- Even richer countries in Europe and North America will not have reached all of the EFA goals by 2030.

This chapter commences with a history of different international summits showing the development of the EFA movement. The first EFA Declaration of the original meeting in Jomtien, Thailand in 1990 up to the last meeting in 2015 in South Korea is described. Then the progress for each EFA goal according to each member state and comparison of achievement of EFA goals by the BRICS member states are provided up to 2016. The final part proposes guidelines for BRICS member states to fully accomplish the EFA goals. The guidelines can be considered individually and collectively in a form of recommendations.

■ **First World Conference on Education for All: Jomtien, Thailand – 1990**

The EFA movement is a worldwide commitment (led by UNESCO) of providing quality basic education for all children, youth and adults (UNESCO 2016). The first world conference on EFA took place in Jomtien, Thailand in 1990. At this conference, 155 countries, as well as delegates from 150 governments and non-governmental organisations, agreed that basic education should be made accessible to all children and that non-literacy had to be reduced before the end of 2000. At that first meeting on EFA, the World Declaration on EFA was adopted (UNESCO 1990). In order to realise the above-mentioned propositions on access to basic education and the eradication of non-literacy, various goals were set to be achieved by the end of 2000, including universal access to learning; a focus on gender equality; an emphasis on learning outcomes; expanding the scope of basic education; improving the environment for learning; and strengthening partnerships. 'However, the EFA targets were not achieved by the year 2000' (UNESCO 2016:n.p.). This may indicate that the set goals were too high and have been too immeasurable. Torres (2001) provides a critical view on the success of the objectives of the Jomtien Conference (UNESCO 1990) stating that there is nothing worse than a plan that cannot be implemented and there is nothing worse than committing oneself to something one cannot achieve.

■ **World Education Forum: Dakar – 2000**

Ten years later, in 2000, at the World Education Forum in Dakar, 164 countries with more than 1100 participants undertook to meet six newly identified EFA goals (UNESCO 2000) by the end of 2015:

- Goal 1: Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children.

- Goal 2: Ensuring that by 2015, all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to a complete, free and compulsory primary education of good quality.
- Goal 3: Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programmes.
- Goal 4: Achieving a 50% improvement in adult literacy levels by 2015, especially for women, and equitable access to basic and continuing education for all adults.
- Goal 5: Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality.
- Goal 6: Improving all aspects of the quality of education, and ensuring excellence for all so that recognised and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

These goals addressed expanding and improving early childhood education; access to education for all; meeting the learning needs of all; improving learning and equitable access to education for all learners, with a focus on female learners; and improving all aspects of education. As evident, the word 'all' is used and emphasised in each of the goals.

Education usually focuses mainly on primary or basic education, while the word 'all' includes preschool learners, primary and secondary school learners, young people and adults. These goals thus include all – everyone. The EFA goals also link with the UN (2014) MDGs, especially MDG 2 on primary education and MDG 3 on gender equality in education. The MDGs are global, time-bound and quantifiable targets for addressing extreme poverty in its many dimensions, with an emphasis on income disparity, starvation, disease, lack of adequate shelter and exclusion. At the same time, these goals also highlighted the improvement in gender equality, education and environmental sustainability. In 2016, these MDGs were replaced by the SDG (SGDs; UN 2016).

As with the evaluation of the 1990 EFA goals, the 2000 goals were evaluated in 2015 in the EFA *Global Monitoring Report* (UNESCO 2015a). The international Global Monitoring Report showed that there had been an improvement in some parts of the world, yet the global outcome was not positive. The following are the findings of reported progress:

- The number of learners and adolescents not attending school has been decreased by half since 2000.
- An estimated 34 million more children attend school.
- Great progress has been made on gender parity.
- National governments have also made greater efforts to measure learner outcomes through national and international assessments.

The Global Monitoring Report (UNESCO 2015a) also indicates a few negative findings regarding achievement of the EFA goals:

- Fifty-eight million children are still not attending school.
- Hundred million children do not complete primary school.
- Inequality in education has increased, with the poorest and most disadvantaged children suffering maximum from it.
- The poorest children in the world are four times more likely not to attend school than the richest children and five times more likely not to finish primary school.
- Conflict seems to have been a huge influence, with a large number of learners who live in these areas of conflict.
- In general, the quality of education remains poor or it does not reach the agreed outcomes; millions of learners leave school without the necessary basic skills.
- Education remains underfunded.

As the Global Monitoring Report (UNESCO 2015a) indicates, the future educational goals and aims should be specific, clear and measurable. The comparison of the EFA goals of Jomtien (1990) and Dakar (2000) in Table 5.1 clearly shows the similarities between the two. The comparison also shows the adjustment and change in the EFA goals (1990–2000) for 10 years.

TABLE 5.1: EFA goals: Jomtien conference versus Dakar conference.

Jomtien: 1990–2000	Dakar: 2000–2015
Jomtien 1: Early childhood care and development activities	Dakar 1: Early childhood care and education
Expansion, including family and community intervention, especially for the most disadvantaged and disabled children.	Expansion and improvement, especially for the most vulnerable and disadvantaged children.
Jomtien 2: Primary education	Dakar 2: Primary education
Universal access and completion by the year 2000.	Access to free and compulsory education for all children, particularly girls, children in difficult circumstances and children belonging to ethnic minorities.
Jomtien 3: Learner performance	Dakar 3: Learning needs
Improvement in learner performance so that an agreed percentage of learners of a particular age can achieve or exceed particular levels of performance.	Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programmes.
Jomtien 4: Adult literacy	Dakar 4: Adult literacy
<ul style="list-style-type: none"> • Reduction in adult non-literacy. • Every country should have halved the non-literacy rate of 1990 by 2000. • Focus on women and the inequality of male versus female non-literacy. 	<ul style="list-style-type: none"> • Achieving a 50% improvement in adult literacy levels by 2015, especially for women. • Equitable access to basic and continuing education for all adults.
Jomtien 5: Extension of basic education and training	Dakar 5: Gender equality
Regarding other essential skills as required by young people and adults, measured by assessed effectiveness of the programme in terms of behavioural change and the impact thereof on health, work and productivity.	<ul style="list-style-type: none"> • Eliminating gender disparities in primary and secondary schools by 2015. • Focusing on ensuring girls' full and equal access to and achievement in basic education of good quality.
Jomtien 6: Increased acquiring of knowledge, attitudes and skills	Dakar 6: Improving all aspects of the quality of education
For the sake of a better quality of life and sustainable development for individuals and families by using all available media sources.	Ensuring excellence so that all recognised and measurable learning outcomes could be achieved, especially in literacy, numeracy and essential life skills.

The EFA goals 1 to 4 have not changed much from the Jomtien Conference to the Dakar Conference. As the Global Monitoring Report (UNESCO 2015a) indicates, many goals have not been achieved. However, this is more clearly described in the 2000 Dakar Declaration. Goal 4 on adult literacy is described more clearly and measurably at the Dakar meeting. While the Jomtien Conference highlights the reduction in adult non-literacy, the

Dakar meeting specifies a 50% reduction in adult non-literacy. Goals 5 and 6 of the Jomtien Conference are very vague and unmeasurable, while Torres (2001) states that the EFA goals should be clear, measurable and realistic.

In 2015, the Global Monitoring Report (UNESCO 2015a) reported back on each goal considered during the 2000 Dakar meeting as follows:

- As far as early childhood care and education (Goal 1) is concerned, only 47% of the countries concerned have achieved this goal, and 45% of the countries have failed to do so. Recommendations for post-2015 are that primary education should be expanded to include all children, especially the poorest and the most disadvantaged children. The availability of data on early childhood care and education should also improve much. Another important recommendation is that 1 year of pre-primary education should be made compulsory (UNESCO 2015a).
- The general outcome of universal primary education (Goal 2) shows that only 52% of the countries have achieved this goal; 38% of the countries fall short in this respect. Recommendations for 2030 regarding universal primary education are that marginalised groups, such as poor, rural children, children in areas of conflict, working children, children with disabilities, children from ethnic and linguistic minorities, children affected by Acquired Immune Deficiency Syndrome (AIDS) and girls living in rural areas, should receive urgent attention. In these cases, better data should also be obtained to measure progress (UNESCO 2015a).
- Concerning EFA Dakar Goal 3 on young people's learning needs and adults' access to appropriate learning and life skills programmes, the outcome is as follows: only 45% of the countries have achieved this goal, and 46% of the countries are still far from achieving it. Recommendations for 2030 include second opportunity programmes for young people and adults. Once again, the availability of data is singled out as a problem (UNESCO 2015a).

- After 25 years, adult literacy and education still remain a major challenge in 2015 (Jomtien, Thailand - 1990 to Incheon, South Korea - 2015). Only 23% of the countries concerned have achieved Goal 4; 58% of the countries are still very far from achieving it. Recommendations include specifying a level of functional literacy that all adults should reach. Once again, the availability of data is a problem (UNESCO 2015a).
- Looking at the assessment of gender equality and gender parity (Goal 5), the picture is as follows: 48% of 157 countries have achieved the goal of gender equality if secondary schools are the criterion. Child marriages and teenage pregnancy remain challenges. The poorest girls remain the group with the poorest chance of being enrolled at a school. In Pakistan, only 70 girls attend school for every 100 boys. Recommendations for post-2015 aim to make schools safe, inclusive and gender-sensitive, where teaching and learning empower the learners and improve the ratio between the two genders. Resources should focus on communities where gender inequalities occur (UNESCO 2015a).
- In terms of improving the quality of education (Goal 6), the following recommendations are made: a great need exists for more teachers who are well trained. The teacher-learner ratio in Africa is 1:42, while the ratio of trained teachers to learners rises to 1:55 at primary schools in Africa. The world median ratio is 1:19. The learning material should be improved, and the curriculum should be relevant (UNESCO 2015a). The Global Monitoring Report (UNESCO 2015a) points out that there is still much work to be carried out regarding learning material and teacher-learner ratio. Although success has been achieved in some parts of the world, the average progress on achieving the EFA goals has not been satisfactory.

■ **World Education Forum: Incheon, South Korea - 2015**

The 2015 World Education Forum was held in Incheon, South Korea. This meeting was attended by 1600 participants from 160 countries, with the adoption of Incheon Declaration for the

next 15 years. In the foreword to this declaration, the importance of the progress achieved since Jomtien, Thailand 1991 was recognised. The World Education Forum (2015) accepted the efforts being made so far; however, it admitted with great concern that education for all is still far from having been reached. The new vision of the Incheon Declaration includes many of the existing EFA goals of both the Jomtien Conference and the Dakar conference. Again, this shows that many of these goals have not been achieved. The EFA goals of Jomtien and Dakar conferences have always been based on UN's MDGs. Particular focus is placed on Goal 2 (universal primary education) and Goal 3 (gender equality). However, in the context of the Incheon Declaration, it is important to mention UN's new SDGs (UNDP 2015) which have replaced the MDGs.

The Incheon Declaration (World Education Forum 2016) presents the following vision regarding EFA for 2030:

- Ensuring inclusive and equal access to education of good quality and promoting lifelong opportunities for learning for all. This vision is in line with SGD 4, which refers to quality education.
- Expanding access to education. Free education for the first 12 years as well as 1 year of pre-primary education for free. A large number of learners who are not attending schools, as well as adolescents, should have meaningful opportunities for education and training.
- Inclusivity and equality form the cornerstone of the transformational education agenda.
- The importance of gender equality in achieving education for all.
- The declaration is committed to quality education and improving learner outcomes.
- The countries concerned are committed to promoting opportunities for quality lifelong learning for all.
- A significant part of the world population lives in areas of conflict; therefore, a large number of people do not receive education.

The authors of the Incheon Declaration in South Korea realised the importance of implementation. Plans have been prepared since Jomtien 1990, but the evaluation of these objectives and aims show that progress is not satisfactory. Incheon 2015 therefore proposes an implementation plan in order to implement its vision (World Education Forum 2016). The responsibility for the successful implementation thereof lies with the governments of the countries concerned. A request for powerful global and regional collaboration is being made to ensure implementation. The success of the 2030 agenda is based on good policy and planning as well as arrangements for effective implementation with regard to the EFA goals. A significant increase in funding is being requested, especially in the countries where the EFA goals have not yet been achieved. An appeal is made to the convenors of the World Education Forum 2015 as well as UNESCO to provide both individual and collective support to countries that may not be able to achieve the EFA goals in terms of implementation by 2030. Such support should be provided through technical advice, national capacity-building and financially based support. UNESCO is mandated to coordinate the implementation of the 2030 EFA agenda. It is agreed that a comprehensive and complete national monitoring and evaluation system should be established in order to provide effective evidence to guide the formulation of policy. Direct reference is made to the legacy of Jomtien 1990 and Dakar 2000 and the ultimate achievement of the goals by 2030.

Incheon 2015 in South Korea is still focusing on the EFA goals set in 1990 at the Jomtien Conference in Thailand. Many of the original EFA goals have only been rewritten and refined, but 25 years after Jomtien, many goals have yet to be achieved. Designing BRICS-specific guidelines to achieve the EFA goals by 2030 is therefore of vital importance. The progress of the BRICS member states regarding the EFA goals is discussed next.

■ Education for All: The BRICS member states' progress

As stated earlier, the BRICS member states are committed to the EFA goals. In November 2013, UNESCO and BRICS delegates met in Paris to discuss the importance of the BRICS member states regarding the provision of education (UNESCO 2013). Millions of learners have gained access to schools and several world-class centres have been established; however, the goals were not fully achieved. A detailed progress of the BRICS member states towards the EFA goals was evaluated by the end of 2015. The progress of each member state according to each EFA goal is described below.

■ Brazil

■ Education for All goal 1: Early childhood care and education

Although poverty has come down in Brazil, the poorest section of the population still faces educational challenges. The age group of 0–6 years is the most vulnerable group to poverty. The school attendance and school enrolment rates have improved to a certain extent. In 2000, a total of 5 338 196 learners had access to early childhood education, and by 2013 it increased to 7 590 600 (EFAR Brazil 2015). Although progress has been made, day care and universal education for all are still to be expanded and improved in Brazil so that it is equally accessible to all.

■ Education for All goal 2: Universal primary education

Access to primary education in Brazil has been improved in terms of students from different economic status, background and level of abilities. According to EFAR Brazil (2015), the number of

learners who described themselves as 'white', 'black' or 'mixed race' has decreased by 5%, and the access of the poorest group according to per capita income has risen from 93.9% in 2004 to 97.5% in 2012. Brazil is getting close to 100% attendance for universal primary education, only 2% of learners do not attend primary education.

■ **Education for All goal 3: Learning needs and skills of young learners and young adults**

Brazil has introduced changes to education policy in terms of young and adult learning; however, the age group of 15 to 17 showcases challenges in terms of access and attendance. According to EFAR Brazil (2015), attendance was 81.1% in 2001, rising to 84.2% in 2012. This represents a non-attendance estimate of 15.8% and indicates that EFA Goal 3 was not achieved.

■ **Education for All goal 4: Adult literacy**

The non-literacy rate in Brazil stands at 8.7% for the population aged above 15 years (EFAR Brazil 2015). High non-literacy rate is especially noticeable in the north-east areas of the country, where one in five residents is non-literate. The Instituto Brasileiro de Geografia e Estatística (2012) informs that the non-literacy rate in rural areas is 21.12% higher than in urban areas, which is not surprising considering more difficult access to schools.

■ **Education for All goal 5: Gender equality and parity**

Gender equality and parity focuses mainly on the ratio of male versus female individuals at specific ages and levels of education. Statistics provided by EFAR Brazil (2015) regarding the different age groups clearly show gender parity. This in turn speaks to

Brazil's alignment with EFA Goal 4. There are balanced numbers of learners of both genders in the preschool group (0–5-year old) and school group (6–14-year old). However, there are 10% more 12-year-old female learners than male learners who have completed 4 years of schooling and 30% more 16-year-old female learners than male learners who have completed 8 years of schooling (Instituto Brasleiro de Geografia e Estatica 2016). This indicates that the inequality still exists in some respects. This is also true for gender biased occupations. The female representation in science and technology is still low, while women are in the majority for careers associated with care and education (EFAR Brazil 2015).

■ Education for All goal 6: Quality of education

Brazil has been participating in the PISA since 2003. As evident from PISA reports, Brazil performs below average in mathematics (between 57 and 60), reading (between 54 and 56) and science (between 57 and 60), compared to 65 of other countries part of the OECD 2012). EFAR Brazil (2015:63) describes the quality of education in Brazil as '[p]rogress has been significant, but much is still left to be carried out. The challenge becomes even greater when results of Brazilian students are compared with other countries'. As evident, Brazil has not yet achieved EFA Goal 6.

■ Russia

■ Education for All goal 1: Early childhood care and education

Russia is very close to achieving EFA Goal 1. According to the World Bank (2016a) and the World Development Indicators (2016), 92% of learners have been attending pre-primary education. EFAR Russia (2014:9) confirms this in its evaluation with the statement that '[t]he criteria of the EFA programme

have been satisfied in the area of preschool education in the Russian Federation'. Although statistics for 2016 are not available yet, the curve in terms of early childhood care and education in Russia bends upwards and should be close to 100% by 2016.

■ **Education for All goal 2: Universal primary education**

UNESCO's review on the universal primary education review of Russia assesses the outcomes of EFA Goal 2 in Russia as follows: More than 99% of school-going children have already been included in general primary education in Russia. According to the World Bank (2016a), the attendance rate was 97% in 2012, and the World Development Indicators (2016) statistically confirm it as 97.5%. The Russian policy and model could be used by other BRICS member states.

■ **Education for All goal 3: Learning needs and skills of young learners and young adults**

Secondary general education is compulsory in Russia until the age of 18 (Ministry of Russian Education 2016). The EFAR Russia report indicates that 99% of Russian learners aged 5–18 years attend school in basic and vocational education (EFAR Russia 2014). It could be concluded that Russia also meets all EFA goals. Success in the first three EFA goals are substantiated by the Global Education Report (UNESCO 2016b), where the Russian education system is rated as the 12th best in the world. Pearson's (2014) index based on OECD graduation rate data ranks the Russian education system at 13th overall in the world.

■ **Education for All goal 4: Adult literacy**

EFAR Russia (2014) reports that, according to the 2002 census, only 0.5% of the Russian population was non-literate. The Central Intelligence Agency (2016) ranks the literacy level of Russia at

99.7%. The majority of 0.3% non-literates are persons older than 60 years and persons with severe physical and mental deficiencies.

■ Education for All goal 5: Gender equality and parity

The EFAR Russia (2014:19) report states that ‘the most vital strategy of UNESCO’s “Education for All” program – gender equality in education – is being fully applied’. According to the gender equality index of the United Nations Development Programme (UNDP 2015), Russia rank is 50th out of 155 countries. This index focuses on health, empowerment and the labour market in addition to education. In higher education, interesting statistics about access are provided. The UNESCO Institute for Statistics (UNESCO 2016) refers to the feminisation of higher education. The number of female students is 57%, compared to 43% male students (Mezentseva 2006), and the estimates of the UNESCO Institute for Statistics show that there are between 126 and 129 female students for every 100 male students in Russia. The methods and policies applied in Russia should be studied in depth in support of the EFA goals in the other BRICS member states.

■ Education for All goal 6: Quality of education

EFAR Russia (2014) states that the government of the Russian Federation, on the general level of quality of education, meets 95% of the modern standards for education. The international measuring instrument PISA (OECD 2016a) assesses reading, mathematics and science performance in OECD countries. Russia scores an average of 475 (girls 495 and boys 455) for reading, while mathematics is scored at 483 and science at 486. This ranks Russia at 33rd out of 40 OECD countries for reading, 32nd out of 40 countries for mathematics and 30th out of 40 countries for science. Although the quality of education in Russia is fairly good, there still seems to be room for improvement. The World

Education Forum (2016) ranks the primary education of Russia at 47th out of 140 countries and its higher education at 59th out of 140 countries.

■ India

■ Education for All goal 1: Early childhood care and education

According to the Global Monitoring Report (UNESCO 2015a), 47% of the 175 EFA countries have achieved EFA Goal 1 on universal pre-primary education; 8% of these countries were close to achieving EFA Goal 1, with India being one of them. India has been successfully expanding its access to pre-primary education since 2001. The number of children with access to preschool education in the age group of 3–5 years has increased from 16.7 million learners in 1999 to 35.5 million in 2012. The total number of enrolments for the year preceding general basic education (age 6) has also increased from 13.9 million learners in 1999 to 41.3 million in 2010 (EFAR India 2014). Although access to early childhood care and education has increased, the quality of this education is pointed out as problematic. EFAR India (2014) indicates that these children who have attended pre-primary education are not school-ready in terms of cognitive and language skills. Quality in this phase of teaching should thus be improved so that learners moving on to primary education are ready regarding the required skills.

■ Education for All goal 2: Universal primary education

The programme for the universalisation of primary education in India is known as *Sarva Shiksha Abhiyan* (SSA 2016). The number of primary schools has increased from 638 738 to 858 916 during 2001 to 2013. The net numbers of enrolment in primary education has increased by 18.6 million learners, from 113.8 million in 2001 to 132.4 million in 2013. The net rate of enrolment, however, was

88.1% in 2013 (EFAR India 2014). These estimates imply non-attendance of primary school education by 11.9% (20.2 million) learners. The net rate of enrolment at higher primary and secondary education is even worse. The net rate of attendance at higher primary education is 64.2%, and at secondary school level it is 41.9%. India has progressed well but has not yet achieved universal access to primary education.

■ **Education for All goal 3: Learning needs and skills of young learners and young adults**

The total rate of enrolment (number of learners enrolled in educational institutions versus actual number of learners in that age group) in secondary education in India is 76.6%, and in post-secondary education, it is 52.2% (EFAR India 2014). These statistics confirm that India is still far from achieving EFA Goal 3.

■ **Education for All goal 4: Adult literacy**

In 2011, the adult (aged 15 years and above) literacy level in India was 69.3%, while it was 72.99% for the 7–14-year-old group (EFAR India 2014). United Nations International Children’s Emergency Fund (UNICEF 2015) confirms the low level of literacy in India as 62.8 for the period of 2009 to 2013. This implies that in a population of 1.252 billion people, approximately 287 million people are non-literate. Therefore, India does not meet EFA Goal 4.

■ **Education for All goal 5: Gender equality and parity**

India has improved significantly since 2000 in terms of gender equality and parity. In 2001, 78 girls had been enrolled in primary education for every 100 boys. By 2014, 85 girls had been enrolled for every 100 boys. In terms of secondary education, the number of female learners had increased from 63 girls per 100 boys in 2001 to 89 girls per 100 boys in 2014 (EFAR India 2014). Although gender

equality in India has improved, this EFA goal has not yet been fully achieved.

■ **Education for All goal 6: Quality of education**

India measures its quality of education internally through the National Assessment Survey (NAS). The results of these assessments show many deficits in terms of quality of education. The 2013, NAS indicated that in language, India scored 257 nationally out of 500, and in mathematics the score was 252 nationally out of 500 (Ministry of Human Resource Development, India 2013). The NAS results for 2010 show that 31.5% of the learners scored between 0% and 40% for language assessment, 35.8% of the learners scored between 0% and 40% for mathematics and 35.1% of the learners scored between 0% and 40% for environmental studies (EFAR India 2014).

Similar to many other developing countries, India does not participate in international assessment programmes such as PISA, PIRLS and Trends in International Mathematics and Science Study (TIMSS). Therefore, international measuring instruments cannot be used for the evaluation of quality education in India. However, the internal assessment instruments (Annual Status of Education Report [ASER] and NAS) indicate that in terms of quality of education in India, EFA Goal 6 has not been achieved yet. The World Education Forum (2016) ranks primary education in India at 66th out of 140 countries. The quality of higher education is ranked at 67th out of 140 countries.

■ **China**

■ **Education for All goal 1: Early childhood care and education**

The PRC had experienced significant growth in its early childhood care and education during 2000 through 2010. This growth was

mainly the result of the focus on early childhood education in the 10th and 11th Social and Development Plans of China. The objective of this plan was access to early childhood care and education for 55% of children for 3 years of pre-primary education, and 80% access to 1 year of pre-primary education for rural learners (China Supply and Marketing Cooperation Network 2006). By the end of 2010, 29.8 million learners were part of pre-primary education, representing 56.6% total rate of enrolment (EFAR China 2013). For the sake of comparison, it is important to mention that compulsory school attendance already applies to Chinese learners from the age of 6 years. China has not yet fully achieved EFA Goal 1, but the growth rate of early childhood care and education is both positive and encouraging. However, the rural areas in China remain a major challenge.

■ **Education for All goal 2: Universal primary education**

The Act on Compulsory Education (China 1986) instilled 9 years of compulsory basic education in China. Following this legislation, China has almost succeeded in achieving EFA Goal 2. The new focus is on specific disadvantaged groups, the children of migrant workers and children living in remote areas. According to the Chinese National Bureau of Statistics (China 2011), China has 2.7 million learners in the age group of 6–14 years who have never received any formal school education. Despite these statistics and the large population of China, 99.1% of the population have received primary school education. China is, therefore, very close to achieving EFA Goal 2.

■ **Education for All goal 3: Learning needs and skills of young learners and young adults**

China has made good progress on EFA Goal 3. The Chinese population that has attended secondary and tertiary education has increased from 604.7 million in 2000 to 823.2 million in 2010

(EFAR China 2013). The current focus in China is on 62.1 million people over the age of 6 years with no formal school education. Owing to China's large population, the number of people without any school education is also significantly higher compared to other countries with smaller populations. EFA Goal 3 has thus not yet been fully achieved in China.

■ **Education for All goal 4: Adult literacy**

The EFA Goal 4 has not yet been achieved in China. In 2010, 54 million people in China were still non-literate, of whom 40 million were women (EFAR China 2013). Three out of every four non-literate persons in China are female. In addition to gender regarding non-literacy in China, a high level of non-literacy prevails in rural areas. In 2010, non-literacy amongst rural residents was two and a half times higher than amongst residents of urban areas (EFAR China 2013). In 2010, 4.7% of the Chinese population (62 million people out of a population of 1252 million) was still non-literate.

■ **Education for All goal 5: Gender equality and parity**

China guarantees gender equality in terms of access to basic education. In 2006, the net entry ratio rate of girls versus boys was 0.04% (EFAR China 2013). Since 2006, more girls than boys have thus been attending basic education. However, gender inequality still exists in adult non-literacy and higher education. As evident in the previous paragraph about EFA Goal 4 regarding the non-literacy rate in China, 40 million women out of a total of 54 million people still are non-literate. In higher education, however, there are 114 female students for every 100 male students (World Bank 2016b). China is still facing challenges in terms of gender equality and has not yet achieved sufficiently EFA Goal 5.

■ Education for All goal 6: Quality of education

The PRC assesses the quality of its education internally but also uses international assessment tools such as PISA, PIRLS and TIMSS. The assessment of quality education in China suggests that the education system in China is doing well. Internal assessment is conducted by the National Basic Education Quality Monitoring Centre. The international instruments assess the quality of education in China as good; however, one important point should be highlighted: China conducts these international tests selectively only in particular provinces and districts, not nationwide. Thus, a national result on the quality of education in China is not provided. Learners in Shanghai performed the best among the 65 OECD countries in terms of PISA (OECD 2012), measuring the reading, mathematics and science skills of 15-year olds. It appears that the schools in the major cities of China are centres of education of highly trained future professionals. However, the PISA scores are by no means representative of the quality of education in the whole of China. While schools in Shanghai have been measured as the best in terms of PISA, the results of other provinces have not been published. Schools in rural areas often have too few teachers, and opportunities for learners in the rural environment often differ from those for learners in urban areas. Much of work still needs to be carried out with regard to the qualifications of teachers. In 2010, only 75.4% of primary school teachers and 59.4% of junior middle school teachers in rural areas held university degrees (EFAR China 2013). Improving the qualifications of teachers remains vitally important for improving the quality of education in China. China should, therefore, focus on the quality of education in rural areas. The World Education Forum (2016) ranks the quality of primary education in China at 28th out of 140 countries and for higher education at 52nd position.

■ South Africa

■ Education for All goal 1: Early childhood care and education

The government of South Africa has greatly expanded early childhood care and education since the Jomtien Conference held in 1990. During 1999 through 2007, enrolment for Grade R (age six years) has improved by 212%. In 1999, 156 292 learners were enrolled in Grade R, increasing to 487 525 in 2007 (EFAR RSA 2013). Participation in early childhood development programmes in the 0-4-year age group stood at 44.7% in 2013, compared to 7% in 2002. Participation in early childhood development programmes in the five-year age group has increased from 39.3% in 2002 to 85.3% in 2013 (Republic of South Africa 2013). Enrolment in the reception phase or Grade R (age six years) has increased from 318 086 learners in 2002 to 779 370 learners in 2013. In 2012, 93.3% of Grade 1 learners have attended Grade R (EFAR RSA 2013). South Africa has thus achieved much in terms of EFA Goal 1, but there is still room for improvement. It is essential that access to Grade R is increased to 100%.

■ Education for All goal 2: Universal primary education

By the end of 2013, 99.3% of learners in the 7-13-year age group (Grades 1-7) attended school in South Africa (EFAR RSA 2013:14; Republic of South Africa 2013:22). Female learners have equal access to primary education – 99.4% of all girls attended school, compared to 99.1% boys attending school. However, in the group of 7-18-year olds (Grades 1-12), more than 500 000 learners are still not attending school (EFAR RSA 2013) and 112 952 learners in the 7-15-year age group are also not attending school. Overall, South Africa is very close to complying with EFA Goal 2, with a 99.3% rate of attendance in primary education.

■ Education for All goal 3: Learning needs and skills of young learners and young adults

In South Africa, secondary education is meant for learners aged 14–18 years. In 2013, 90% of the learners in this age group had access to secondary education (EFAR RSA 2013). However, the 16–18-year age group is a reason for concern because 400 000 learners were not attending school. Many of these learners leave school at the end of Grade 9 to attend institutions for vocational education, such as colleges for further education and training. However, these colleges do not meet the needs of the 430 000 learners who leave secondary schools, as only 4% of learners at these colleges complete their courses (EFAR RSA 2013). Thus, South Africa has not yet achieved EFA Goal 4, which addresses the education and training of young adults.

■ Education for All goal 4: Adult literacy

Adult non-literacy in South Africa is at 5.7% (approximately 4.7 million adults) of the total South African population (EFAR RSA 2013; UNESCO 2013). Although the *Kha Ri Gude* mass literacy campaign has reached about 2.9 million people, it has not made a significant change in literacy levels as it had lasted only 6 months. South Africa has not yet met EFA Goal 4, aiming to have halved non-literacy by 2015.

■ Education for All goal 5: Gender equality and parity

Gender equality and parity in education for South Africa is different according to the group age. In the 0–4-year age group, there are 102 female learners for every 100 male learners (Republic of South Africa 2013). In the 5-year age group, there are 101 boys for every 100 girls (EFAR RSA 2013). In the age group of 7–15 years, there are as many boys as girls. Meanwhile, in the 16–18-year age

group, approximately 440 000 learners do not attend school at all (EFAR RSA 2013), which means that for every 100 males not receiving an education, there are approximately 120 females who do not receive an education either. Good gender equality and parity thus exist in the age group from 0 to 15 years, but EFA Goal 5 is not met in the 16–18-year age group.

■ **Education for All goal 6: Quality of education**

The quality of education in South Africa is one of the biggest challenges with respect to the EFA goals. South Africa assesses quality of education through internal instruments as well as international assessments. Internally, the quality of education is measured using the Annual National Assessment (ANA). Grade 3, 6 and 9 learners are assessed on literacy and numeracy. The results point to an unsatisfactory level of quality of education in South Africa. The same is reported in terms of international measuring instruments. EFAR RSA (2013) summarises the South African TIMMS and PIRLS results as follows:

International comparisons confirm that South Africa fares poorly in terms of learner performance and teacher content knowledge when compared to countries that spend the same or less on education per capita. (p. 37)

South Africa has thus not yet achieved EFA Goal 6 by any means.

□ **Summary: Education for All goals achievement by the BRICS member states**

The achievement of EFA goals differs in the BRICS member states. However, these different levels of achievements of EFA goals were considered to set guidelines for achieving the EFA goals by 2030. The principle of best practices was used so that the BRICS member states can work together to improve their respective education systems. The success of one country could be used to address the achievement of EFA goals in

other countries. It also serves as one of the most important objectives of collaboration in the BRICS organisation regarding the provision of education.

Overall, the BRICS member states have made good progress in terms of some of the EFA goals. However, many challenges to meeting all of the EFA goals still exist. The successes of one or more of the BRICS member states could be used to support the achievements of EFA goals by the other BRICS member states. Regarding early childhood care and education, the new guidelines emerging could be aligned by countries such as Brazil and South Africa, for example, to improve China's outcome for EFA Goal 1. South Africa and India, in turn, could learn from the Russian Federation in terms of EFA Goal 6 targeting quality of education. The BRICS member states that have already achieved or are close to achieving the EFA goals could serve as a basis for designing guidelines.

Possible explanations for the existence of similarities and differences in the EFA goals amongst different countries could be found, *inter alia*, in the following reasons. The identification of these possible explanations is carried out in the context of external and internal determinants. The first possible explanation is the difference in the budgets for funding with regard to education in the BRICS member states. The education budget in Brazil as a percentage of its GDP was 5.9% in 2012, while the Russian budget was 4.2% (World Bank 2016b). The Indian education budget was 4.9% in 2014, and the Chinese budget was 3.55% in 2011, with South Africa spending the most with 6.4% of its GDP (World Bank 2016b). It is worth mentioning that although BRICS member states such as South Africa and Brazil spend maximum on education as a percentage of their GDP, this is not reflected in their achievements of EFA goals. The management of education budgets thus may also need to be investigated.

Another possible explanation for the realisation of EFA goals is the teacher–learner ratio of the BRICS member states in 2015 (World Bank 2016b). The teacher–learner ratio in Brazil is 20.9 in

primary schools and 16.7 in secondary schools. The teacher-learner ratio in Russia is 19.8 in primary schools and 8.8 in secondary schools. In India, the teacher-learner ratio is 31.1 in primary schools and 31.8 in secondary schools. In China, it is 16.3 in primary schools and 13.8 in secondary schools. South Africa has the highest teacher-learner ratio of 33.6 in primary schools and 33.1 in secondary schools. The teacher-learner ratio in India and South Africa explains as to why the quality of education in these two countries does not meet the EFA goals. Lastly, contextual factors, such as language, demography, geography, religion, politics, socio-economics and life philosophy, also play a role in the realisation of EFA goals by each of the BRICS member states.

■ **Guidelines for BRICS member states to achieve the Education for All goals**

The term 'guidelines' in this chapter is defined as a statement or indication for a plan of action. Guidelines are therefore indicators of alignment aimed at starting, streamlining or structuring actions or processes. However, they are not binding because they only provide direction.

Guidelines for effective implementation of the EFA goals in the BRICS member states are presented in the last section 'Recommendations'. These BRICS EFA guidelines are based mainly on the following general EFA guideline questions provided by UNESCO (2015) for each individual EFA goal.

□ **Education for All goal 1 – Guideline question: Early childhood care and education**

- How thoroughly are early childhood care and education contained in national policies, legislation, strategies and plans? Where are the gaps?
- Are early childhood care and education regarded as an integral part of the right to education in national legislation?

- Which sectors or agencies are actively involved in providing early childhood care and education in the country? What type of early childhood care and education services do they provide? How do they complement or overlap one another? What are the successes in ensuring access to education for all children? What are the obstacles? Which groups of children are at the greatest risk of exclusion from early childhood care and education? What efforts are being made to reach them?
- What efforts are being made to ensure quality in different early childhood care and education programmes? What are the challenges? Which good practices for increasing the quality of early childhood care and education were successful?
- What specific strategies and measures have been put in place to increase school readiness amongst all children, especially those from disadvantaged population groups? Is the country having in place a relevant policy to address the quality of public and private early childhood care and education?

□ Education for All goal 2 – Guideline question: Universal primary education

- Is the right to education included in the national constitution and legislation? Is the right to free, compulsory, universal education, at least at the primary level, contained in this legislation? Is the principle of non-discrimination contained in education-related legislation and policy?
- What specific policies and measures are in place to address the obstacles faced by children belonging to disadvantaged groups? Do these specific policies and measures also ensure access to and the promotion of successful completion of primary education?
- To what extent have these policies, strategies and mechanisms within the broader framework of policies that have been implemented addressed the reduction of poverty?
- What efforts (e.g. in terms of broader social policies, incentives, etc.) have been used to reduce the cost of school attendance?

- What policies and measures have been developed to ensure the maximum throughput of primary school leavers to secondary schools?

□ Education for All goal 3 – Guideline question: Learning needs and skills of young adults

- What are the legal provisions contained in national legislation regarding the rights of adults to continue education? Do the countries concerned have specific policies and mechanisms in place for implementing (formal and non-formal) adult education?
- What are the learning needs of young adults and the youth? And how are these needs being addressed?
- How have existing programmes for lifelong learning and skills changed training to adapt to learning needs? Have policies for learning and skills training for young adults been revised since 2000? What could be carried out to adopt such policies and measures more often to address changing learning needs?
- What would be the vision of the country in terms of the promotion of learning and training for all?

□ Education for All goal 4 – Guideline question: Adult literacy

- Is the right to literacy included in national legislation? Are national legislation, policies and/or plans aimed at eradicating non-literacy?
- How could changes in adult and youth literacy since 2000 be explained in the country? What positive factors and obstacles have been influencing the achievement of EFA goal of improving adult literacy by 50%?
- Who are still non-literate? Where are they? How can they be reached with relevant literacy programmes of good quality?
- What type of continuing basic educational programmes are being organised in the country in terms of adult literacy? How could they be made even more effective?

- In which direction should programmes for literacy and continuing education for adults and the youth be developed in the future?

□ Education for All goal 5 – Guideline question: Gender equality

- Does the country have national legislation, policies, strategies, plans and mechanisms against discrimination in education, focusing specifically on gender equality? What specific rights do girls and women have in national legislation pertaining to education?
- What type of gender and other inequalities still exist in the education of the country? At which levels and for what type of education? To what extent? How does this affect the progress of EFA?
- How effective are the existing policies, strategies, plans and mechanisms in promoting or ensuring gender equality in education? What are the main issues or obstacles in promoting gender equality in education? How are girls (or boys) being encouraged to attend school? What strategies have been put in place and implemented to keep girls (or boys) in school and improve their smooth transition from primary education to secondary education?
- What policies and programmes exist to encourage participation of women (or men) in adult literacy and basic education programmes? What strategies have been put in place and implemented to improve the participation of women (or men) in adult literacy and basic education?

□ Education for All goal 6 – Guideline question: Quality of education

- Is quality of education regarded as part of the right to education and contained in national legislation pertaining to education? How is quality of education defined in education-related national legislation, policies and programmes?

- What is meant by ‘quality of education’ in the country? What aspects, indicators and criteria are used to assess the quality of education in the country?
- What specific policies and measures have been put in place to improve the quality of education? Based on the latest teaching experiences, how effective are these policies and measures? What other policies and measures are required?
- What was the experience in the country of the impact of inputs of quality of education (e.g. teachers, textbooks, the school environment, teaching and learning methodologies, support services, etc.) on education in improving learning outcomes?

■ **Recommendations: Education for All guidelines for BRICS member states**

The following guidelines for the BRICS member states aim to accelerate the achievement of EFA goals and are aligned by the above-outlined EFA guideline questions. These guidelines are not binding, but are meant to contribute to decision-making regarding the realisation of EFA goals in the BRICS member states and to support better implementation and realisation of goals. The guidelines below have been compiled for the BRICS organisation.

□ **Early childhood care and education – Guidelines regarding Education for All goal 1**

- Early childhood care and education should be included in the national legislation pertaining to education in different BRICS member states.
- Each of the BRICS member states should have a separate focused section or department that controls early childhood education at national and local government levels.
- Representatives from all role-players (public and private) should have access to the planning, implementation and evaluation of early childhood care and education.

- Role-players in early childhood education should have a shared vision and shared expectations.
- Children aged 0–4 years should not be exposed to formal education programmes. The main focus should be learning through play.
- Early childhood education should be included in formal foundation phase education from the age of 5 years.
- The foundation or initial phase should be from the age of 5 to 9 years.
- Initial education should be free to ensure universal access. This could ensure the inclusion of minority groups as well as poor and rural communities.
- Quality should be ensured through good teacher and practitioner training as well as central control over the curriculum to be followed.
- The quality of early childhood education should be measured annually, using contextualised assessment tools.

The most significant change in the above-mentioned guidelines for the accelerated achievement of EFA Goal 1 of BRICS is the inclusion of learners in the age group of 5–6 years in free basic universal primary education. This ensures that these children would have access to early childhood education, whereby the outcome of EFA Goal 1 regarding increased access could be accelerated. China, for example, is still far from achieving this goal.

□ Universal primary education – Guidelines regarding Education for All goal 2

- The right to free basic universal primary education should be contained in the relevant legislation (the constitution and national legislation pertaining to education) of the BRICS member states.
- Free basic universal primary education implies no school fees for primary education; free learning material (textbooks and

exercise books); free stationery; the provision of free school dresses (if applicable); and free learning aids and support, including, for example, school transport for learners and sanitary pads for female learners. Learner's school attendance should not be adversely affected by his or her financial or economic circumstances.

- Spending of the national budget on basic primary education should be more than 7% of the total domestic product.
- Learners from poor communities, minority groups and isolated rural areas should be a priority in terms of basic primary education.
- Free basic universal education should include learners aged 5-6 years.
- No discrimination in terms of gender, race, minority group or socio-economic level should be allowed.
- Free basic universal education should lead to maximum access to secondary education.
- Free basic universal education should apply from age 5 to 18 years.
- Free basic education should be compulsory from age 5 to 18 years.

The main changes regarding the proposed guidelines are, firstly, the increased funding of primary education, and secondly, the inclusion of learners at secondary education level (14-18 years) in free compulsory education. India, for example, is still far from achieving this goal.

□ Learning needs and skills of young adults – Guidelines regarding Education for All goal 3

- The right to free higher education should be contained in the constitution as well as applicable legislation pertaining to education of the BRICS member states.
- Young adults (aged 19-27 years) should have access to free higher education.

- No young adult may be denied access on the basis of race, culture, religion, gender or socio-economic status.
- Education and training should be market-orientated and relevant to the labour market.
- Young female participants in the education for young adults should, in particular, gain access to the areas of technology and science through special funding.

The above-mentioned guidelines on free higher education are one of the most important changes to be made in legislation and policy, especially in South Africa and India. Free higher education is one of the most important vehicles by which access to higher education could be improved and EFA Goal 3 could be achieved more quickly. India and South Africa, for example, are still very far from achieving this goal.

□ Adult literacy – Guidelines regarding Education for All goal 4

- Literacy education should be prioritised in policy and legislation.
- Non-literate persons should be identified by means of data on the population obtained from census surveys.
- A national register of non-literate persons should be compiled.
- Centres dedicated to the delivery of literacy education should be established.
- These literacy centres should be established at existing facilities such as schools and community centres.
- Non-literate persons should have unlimited access to these centres.
- Non-literate persons should complete a 2-year literacy programme.
- Two or more language teachers working at the schools serving as literacy centres should be appointed as facilitators.
- The literacy programme should be completed in 2 years.

These guidelines thus recommend the establishment of centres dedicated to literacy at schools, based on the data obtained from a national census and other sources in each country. These guidelines are based on the Cuban Literacy Campaign of 1961, by which Cuba improved its rate of literacy from 60% to 96% in 1 year (Prieto Morales 1981). India, for example, is still very far from achieving this goal.

□ Gender equality – Guidelines regarding Education for All goal 5

- Firstly, gender-specific data should be obtained or collected from population registers.
- The data should then be analysed by using gender analysis tools.
- Gender gaps regarding gender in all spheres of life need to be identified.
- Strategies and programmes by which the existing gaps could be closed must be developed.
- The capacity of staff to plan for gender equality should be developed and the staff should be empowered to implement gender equality.
- Sufficient resources must be in place to achieve targets on gender equality.
- The progress in terms of targets on gender equality should be monitored, evaluated and reported regularly.
- The results should be communicated.
- Individuals as well as public and private sectors should be held accountable for achieving targets on gender equality.
- Female participants must have a 50% representation at all levels of society.

These guidelines have been adapted for the BRICS member states and are based on UNESCO's (2011) *Priority Gender Equality Guidelines*. India is still far from achieving this goal.

□ Quality of education – Guidelines regarding Education for All goal 6

The quality of education remains one of the biggest challenges faced by the BRICS member states. The guidelines for improving this would thus be more comprehensive. Russia is the only BRICS member state that has come close to achieving EFA Goal 6. The other four BRICS member states are far from achieving this goal. The guidelines below have been based on and adapted from the UNICEF (2000) working paper series. The guidelines are discussed under the following themes: learners, learning environment, curriculum, teachers and learning outcomes.

Learners:

- Learners should be physically and psychologically healthy.
- Learners need to be provided with nutritious and healthy food.
- Learners should participate in early childhood care and education.
- Learners must attend school faithfully and regularly.
- Learners should have family support.

Learning environment:

- The physical school facilities should be of good quality.
- These facilities include well-maintained neat and clean classrooms.
- Classrooms should be large enough.
- Classrooms should have sufficient school desks and chairs.
- Ablution facilities should be clean and close to the classrooms.
- Clean water must be available at all times.
- There should be no more than 25 learners per class.
- Schools must be safe for boys and especially for girls.
- There need to be a good code of conduct for learner discipline.
- Schools should be centres of inclusivity.
- Schools should be non-violent zones.

Curriculum:

- The curriculum must be learner-centred.
- The curriculum should be non-discriminatory in terms of gender, language and religion.
- The curriculum should be based on clearly defined learning outcomes.
- The curriculum outcomes should match the grade or level of learners.
- The curriculum should be followed in a specific order.
- The curriculum should be unique to the context of relevant country.
- The curriculum should include the following key learning areas: literacy, numeracy, life skills and programmes for conflict resolution skills.
- Conflict resolution skills should help learners to reduce and resolve conflict in a peaceful manner.
- No homework should be given to learners up to the age of 13.

Teachers:

- Teachers should be professionally trained instructors.
- Teachers should have a thorough knowledge of the subject matter and pedagogy of their learning area.
- Teachers must be in school on time every day.
- Teachers must be in their classrooms.
- Teachers should be prepared with their lessons.
- Teachers themselves are lifelong learners and should constantly develop themselves professionally.
- Continuous support should be provided to teachers regarding learner-centred education.
- Teachers at ground level should be part of policy-making at all levels of education.
- Teachers should be able to give feedback regarding all education matters.
- Teachers should be compensated as professionals.
- Teachers should focus on education; therefore, good administrative support and good leadership should be in place.

- Teachers should use technology in the teaching-learning process.

Quality of learning outcomes:

- High-quality learner outcomes or products of education should include everything that each individual learner should know and be able to do at the end of a specific period or phase, including learners' attitudes and expectations about themselves and what society expects from them.
- A level of good performance should be achieved in literacy and numeracy according to learners' abilities.
- Formative assessment should be used more as it provides more opportunity for corrective teaching and the identification of deficits that affect quality negatively.

The quality of education in most BRICS member states is not satisfactory. This should be the main focus with reference to all of EFA goals, as quality of education has not measured well according to national and international measuring instruments.

The above-mentioned guidelines are one of the objectives of collaboration in the provision of education in the BRICS member states. The purpose of these BRICS EFA guidelines was to accelerate the realisation of EFA goals. These guidelines are not prescriptive but merely meant to give guidance with regard to the BRICS EFA goals. The guidelines are not enforceable but should help education policymakers address deficits in their education systems.

Brazilian education system: Aims, achievements and alignment with the BRICS organisation

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■ Introduction

Although the BRICS member states (Brazil, Russia, India, China and South Africa) do not belong to the developed world in terms of per capita income, they are considered as five influential emerging economies, locally and globally. The acronym 'BRICS' originated in 2001 to acknowledge the economic expenditure of BRIC. At that time, it was evident that economic potential along with demographic development would place the four countries in a prominent position at international level. As of 2006, the BRIC countries engaged in active collaboration in order to strengthen their economic and political positioning within the international community. In 2010, South Africa joined the four countries, and thus the acronym was extended to 'BRICS'.

From the establishment of BRICS organisation, the main focus was on creating a more democratic and plural world order based on collaboration and collective decision-making. To that end, the BRICS alliance aims to challenge the accepted Western hegemony and legitimacy with the intention to promote mutual political and economic interests. In short, the BRICS nations pursue economic and social development with the joint vision of establishing a more just and sensitive international order. The five pillars explored by the BRICS Think Tank Council (BTTC 2015, 2017) in projects and documents refer to: (1) promoting cooperation for economic growth and development; (2) peace and security; (3) social justice, sustainable development and quality of life; (4) political and economic governance; and (5) achieving progress by sharing knowledge and innovation. In terms of knowledge, technical progress and innovation, BRICS is committed to becoming on a par with developed countries. As is evident within the literature (BTTC 2015; Niemczyk 2018), scientific and technological developments are associated with increased

productivity. To that end, BRICS is focused on creating strong networks amongst governments, universities and research institutes to promote human mobility and the exchange of knowledge.

Each member state offers unique attributes and prospects, thus maximising the significance of BRICS organisation. It is worth mentioning that BRICS nations occupy a vast landmass and therefore a significant amount of natural resources. The European Parliament (2012:4) reports that the main aspects indicating the relevance of BRICS nations in development collaboration are: (1) the outstanding size of their economies; (2) strong growth rates, leading to increasing significance in world economy; and (3) the demand for a stronger political voice in international governance structures.

In the past years, the five dynamic BRICS economic countries have shown determination and commitment to mutually beneficial collaboration. This is demonstrated in the increased trade (exchange of goods, resources or knowledge) and financial investments amongst BRICS nations. The partnership was also increased in the arena of global governance, global economic issues, geopolitics and other pressing issues. BRICS's (2015) Ufa Declaration stressed the importance of principles such as openness, solidarity, inclusiveness, equality and reciprocity. It is essential to note, however, that with all good intents and commitments to maintain economic growth, the BRICS nations are facing several challenges. Just as many other developing countries, the five member states experience high levels of poverty, unemployment and inequality, which limit the citizens' right to social and economic justice (BTTC 2017).

In order to fully benefit from the potential of the alliance, further strategic steps are to be developed and implemented. It is needless to say that accessible quality education is an essential ingredient for the full development of any nation. Therefore, the exploration, evaluation and enhancement of education systems in BRICS nations need special attention. To that end, this chapter

firstly explores educational objectives and the vision forward of the BRICS organisation. Secondly, attention is devoted to Brazil's educational aims at various levels of education, along with the external determinants that affect the system. Then Brazilian education is viewed in alignment with the objectives of the BRICS organisation along with the EFA goals. The final section, titled 'New Frontiers', provides a number of conclusions along with recommendations.

■ The BRICS organisation and the role of education

As stated earlier, the BRICS organisation is committed for a long-term alliance in diverse areas, including education. The ministries of education in Brazil, Russia, India, China and South Africa have pledged to maximise educational collaboration and mutual support for the benefit of education developments in BRICS nations. Similar to many aspects of life, education systems change according to complexities connected to globalisation, technological advancement, government agendas and often international pressure. Therefore, in order to transform the economy and quality of life in BRICS countries, attention needs to be devoted to enhancing the accessibility to and quality of education, improving learning techniques and investing in lifelong learning and the development of knowledge and skills.

In 2014, during the 6th BRICS summit in Brazil, the leaders of each member state strongly acknowledged the importance of education for the economic development of each nation and committed themselves to strengthening current collaboration to enhance the excellence of education. During that time, it was also clearly recognised that investment in education was of the essence to address inequality and promote social justice. Irina Bokova, the director-general of UNESCO (2014), indicated as follows:

BRICS have already transformed the world map of education, bringing millions into school, establishing centres of world-class learning, driving innovation, and sharing expertise and knowledge.

With stronger cooperation in education, supported by UNESCO, BRICS could have the power to go further in improving education levels and achieve long-term sustainability faster. (para. 7)

As evident from the UNESCO (2014) report, the BRICS nations met for the first time in 2013 at the UNESCO offices in Paris to discuss close collaboration in education. The ministers of education of BRICS nations and UNESCO officials engaged in active discussions about progress and excellence in education. The key areas identified for BRICS-UNESCO collaboration included data collection, learning assessment, technical education and training and the use of information and communication technology in education. The BRICS organisation is committed to the global movement, EFA, aiming to offer quality basic education for all children, youth and adults. As reported by the BTTC (2015:76), collaboration with UNESCO aims at achieving education for all through:

- Expanding and enhancing early childhood care and education, particularly for disadvantaged children.
- Ensuring that all children, especially girls in difficult circumstances and those belonging to ethnic minorities, complete primary education of good quality.
- Ensuring that the learning needs of all young people and adults are met through equitable access to learning and life skills programmes.
- Achieving a 50% improvement in levels of adult literacy, especially for women, and equitable access to basic and continuing education for all adults.
- Eliminating gender disparities in primary and secondary education.
- Enhancing all aspects of the quality of education and ensuring excellence so that recognised and measurable learning outcomes are achieved, especially in literacy, numeracy and essential life skills.

In addition, the BRICS member states aim at developing competitive HEIs committed to: (1) increasing graduation rates; and (2) promoting high-quality learning and research that, as a

result, would contribute to the economy through innovation and productivity. The focus is also on strengthening the connections amongst BRICS universities, promoting networks amongst educators, creating opportunities for student exchange programmes and facilitating mutual recognition of qualifications and the transfer of credits amongst participating institutions.

In order to ensure that the above-mentioned education goals are achieved, the BTTC (2015:98) came up with several recommendations meant to promote inclusive and equitable educational opportunities and improve the competitiveness of each member state. To that end, BRICS should:

- Continue to support the UN and its branches, such as UNESCO, and participate in the finalisation of the formulation of SDGs.
- Continue close collaboration on a ministerial level in the area of education to discuss standardising the target indicators across BRICS countries (all member states should develop relevant performance monitoring and evaluation systems to ensure that progress in education is documented).
- Conduct research to determine how the national development banks need to target financing to address educational and vocational needs in BRICS and the respective regions of its member states.
- Develop a centralised approach for sharing and collecting data regarding areas of development collaboration in the field of education (BRICS countries should work together to improve the quality of data collected and to ensure that the data are comparable).
- Respond to the dual needs of providing basic education and preparing the workforce for the modern economy and technical sectors.
- Invest in quality preschool education and place its development in a higher strategic position.
- Create research forums in universities and centres across BRICS nations to allow for greater collaboration in education and research sectors.

Recommendations from BTTC reports are also directed towards higher education. The chapter on progress through sharing knowledge and innovation described in two documents (BTTC 2015:156, 2017:100-102) provides useful recommendations in terms of comparative initiatives and learning from one another. Special attention is given to research capacity-building, research productivity and the exchange of researchers. As evident in the above-mentioned reports, the BRICS nations are encouraged to:

- Facilitate visas for researchers, by making special arrangements to enable and encourage exchanges amongst BRICS researchers, including simplifying visa approval procedures and reducing approval period.
- Stimulate the sharing of experiences of technology licensing offices of universities and research and development institutions and comparative research on investments and other policies for higher education to build human resources for innovation.
- Sponsor research focused on public-private partnership funds and efforts to reinvigorate research in universities.
- Support comparative initiatives to enhance linkages between universities and the industry (the separation of teaching and research in BRICS countries has adversely affected innovation and member states can learn from one another to improve linkages).
- Facilitate technology and knowledge transfer, for instance, by establishing a fund for technology transfer that will act as a depository where owners of the rights to technologies will be able to apply for assistance in their commercialisation (projects may be financed by the fund or jointly with private companies and development institutions from BRICS nations).
- Establish a BRICS institute of innovation and technology.
- Support joint projects carried out by researchers and institutions from all BRICS countries by creating a BRICS framework programme to finance joint projects with funds allocated from NDB.

- Establish a partnership amongst funds supporting research projects in each of the BRICS countries to finance joint projects carried out by researchers and institutions from all BRICS nations.

Taking a closer look at the pillar of ‘progress through sharing knowledge and innovation’, it is evident that the BRICS nations are dedicated to collaborating and capitalising on comparative advantages (BTTC 2017:85). The reported intention (BTTC 2015) is to make an investment to increase joint research endeavours amongst member states:

It is, therefore, important to support INTRA-BRICS knowledge production and dissemination and to facilitate researcher and student exchange. BRICS should aspire to nurture world-class research institutions and education facilities that can make a significant contribution to global education and knowledge systems. (p. 119)

Managing the expansion and demands of educational equity and research also requires sharing knowledge and a framework about developments across the five member states. With that in mind, in July 2018, the BRICS ministers of education signed a declaration to address 21st century challenges and opportunities regarding the Fourth Industrial Revolution. As reported by Villette (2018), the declaration included the agreement of member states to strengthen collaboration at the level of technical and vocational education and training. The focus was also on confirming the commitment to the UN’s 2030 Agenda for Sustainable Development. Naledi Pandor, the South African minister of higher education and training, acknowledged that the declaration was ‘about sharing best practices, and thereby strengthening the education systems of our respective countries’ (Villette 2018:para. 6). She further stated that the ministries of education would ensure that the relevant senior official in each member state will be held accountable for putting in practice the educational plans outlined within the declaration.

In spite of evident progress, challenges persist in BRICS nations. The 2017 report (BTTC 2017:63) brought attention to the

issues of poverty, lack of family support and gender inequality in terms of education provision. The BRICS nations were urged to address these issues to promote free education for all. Leroy and Symes (2001) identify poverty as a key factor hindering access to education and the progress of children in schools. This is often associated with parents' low level of education or unemployment. Many parents are unable to provide any kind of support for their children or the school community. It is not unlikely that children are being neglected or are homeless or addicted to unhealthy substances. In addition, gender inequality is visible in terms of girls' lower access to education and poorer rates of literacy and graduation. In fact, poverty and gender inequality limit children's learning abilities and negatively affect children's school experience and overall development (UNESCO 2014):

Wide and often widening social inequalities in BRICS are reflected in inequalities at all levels of education. Poor families are struggling to feed their children, resulting in chronic malnourishment during children's earliest years causing lifelong harm to their learning capacities. All BRICS (countries) recognise that they need to improve the quality of education significantly if learners are to succeed in life and work, and contribute positively to the economy. (p. 2)

It is noteworthy that the BRICS countries are providing education to over 40% of the world's population (UNESCO 2014). The commitment to education displayed by the BRICS countries is growing and promising; however, there is a need to pay closer attention to the quality of educational input and outcomes. Research undertaken by Bawa (2012) suggests that BRICS countries play a significant role in scientific output; however, the contribution is predominantly numerical. This, in turn, brings uncertainty to some degree in terms of the relevance and quality of the output (Nascimento 2013).

The economic development of BRICS nations has a significant influence on the standards of living within the member states. As reported in scholarly literature, a correlation exists between a nation's quality of education and its economic growth. However, it is about quality, not sole access to education or the number of

years within the education system (Hanushek & Wößmann 2007). To that end, it is imperative that the BRICS member states invest in quality education, not only to maintain but also to maximise their economic growth.

■ **Federative Republic of Brazil: Overall scenario**

Brazil, or officially the '*Federative Republic of Brazil*', is the largest country in South America, sharing borders with 10 countries. It is the fifth largest country in the world in terms of land and a population of close to 210 million. The majority of its population resides along the Atlantic coast in cities such as São Paulo and Rio de Janeiro. The country has 26 states and one federal district. For political administration, the states are divided into five regions.

Brazil was under Portuguese rule from 1500 to 1822, when it became independent. Going through monarchical, oligarchic, populist and military rule (Stanek 2013), the country had its democracy re-established in 1984. The Brazilian democratic government, based in the capital city, Brasília, since 1960, is divided into three branches: executive, legislative and judicial. The president, elected for 4 years (with a chance to be re-elected for a second term), is the head of state and government. The current Brazilian Constitution, known as the 'Citizens' Constitution', was enacted on 05 October 1988.

Brazil has experienced significant economic growth as a developing country in Latin America, which qualified it as a BRICS member state. In spite of such positioning, an ineffective education system contributes to ongoing poverty and inequality within society.

As reported by Sandoval (2012:4), Brazil is the fifth largest nation in the world in terms of landmass and population. Both natural resources and human capital had a positive effect on Brazil's economic growth, yet 'human development has not risen proportionally to economic growth' (Sandoval 2012:4). Brazil

leads the Latin American region on the pillar of ‘innovation capability’, yet remains below its potential (Schwab 2018:32). The educational attainment remains a challenge, taking into account the high percentage of 15–29-year olds who are either ‘not in education’ or ‘not in education and not employed’ (OECD 2018a:n.p.). The results of participation in the PISA (2000–2012) show that Brazil has displayed successive increase in its results, although the results continue to be inferior to the averages of country members of OECD and other Latin American countries.

The goals and expectations of the Brazilian education system are defined in various statutory laws. Besides the Federal Constitution, education is regulated by several laws, such as the Law of Directives and Bases for National Education (Law No. 9394 of 1996, Lei de Diretrizes e Bases da Educação Nacional [LDB]), the Statute of the Child and Adolescent (Law No. 8069 of 1990, aka ECA), Law No. 10.098 of 1994 establishing general rules and basic criteria for the promotion of accessibility for people with disabilities or persons with reduced mobility, Law No. 10.436 of 2002, which provides for the Brazilian sign language, Law No. 7.853 of 1989 on support for persons with disabilities and Law 10.172 of 2001, known as the ‘National Education Plan’.

The National Education Plan 2014–2024 provides goals of the national education system (OECD 2015). The five main goals are:

- achieving universal education for 4–17-year olds, including children with disabilities
- raising the quality of compulsory education and teachers at all levels of education
- increasing enrolment in and the attainment of secondary and tertiary education, particularly amongst students from specific populations
- improving enrolment rates in vocational education and training, including tripling enrolment in secondary vocational education and training
- increasing public investment in public education to 10% of the GDP.

The principles outlined within the Brazilian Constitution (Presidency of the Republic of Brazil 1988) serve as guidelines for national education. Article 205 of the constitution states that education:

[/]s the right of all and the duty of the National Government and family, [and] shall be promoted and encouraged with societal collaboration, seeking the full development of the individual, preparation for the exercise of citizenship and qualification for work. (p. 142)

In article 206, the constitution further determines that the government must fulfil its duty in terms of the teaching principles of:

- equality of conditions for access to and remaining in school
- freedom to learn, teach, research and express thoughts, art and knowledge
- pluralism of ideas and pedagogical concepts, and the coexistence of public and private teaching institutions
- free public education in official establishments
- valorisation of teaching professionals, guaranteeing, as provided by law, career plans, with admittance of public school teachers exclusively by public competitive examinations and professional credentials
- the democratic administration of public teaching as provided by law
- the guarantee of standards of quality
- a national professional base salary for public school professionals in accordance with federal law.

The duty of the National Government in terms of education is also outlined in article 208 of the constitution (Presidency of the Republic of Brasil 1988). The expectations are:

- free compulsory elementary education from 4 to 17 years of age, including assurance that it will be offered gratuitously for all who did not have access to it at the proper age
- progressive universality of gratuitous secondary school education
- special educational assistance for the handicapped, preferably within the regular school system

- early education in nurseries and preschool for children up to 5 years of age
- access to higher levels of education, research and artistic creation according to individual capacity
- provision of regular night courses adequate to the student's condition
- educational assistance at all stages of basic education by means of supplemental programmes of school books, teaching materials, transportation, nutrition and healthcare.

In order to meet the above-stated goals and objectives pertaining to education, the government of Brazil established policies to provide assistance for those in need. As reported in BTTC (2017:55), in 2003, the government introduced the Bolsa Familia programme, meant to combat poverty and inequality issues. As reported by Curry, Cadiogan and Giugliano (2013), the programme focused on providing support for children of very poor families in order to break the intergenerational cycle of poverty and to decrease school drop-out rates. Poor families were offered a financial incentive on condition that their children would attend school for most of the school year. The school attendance was monitored. Additional requirements included mandatory health checks every few months and the verification of the living conditions of families once per year. Those who did not comply with the requirements had their grants terminated.

In 2007, the Ministry of Education established the National Programme of Educational Technology - ProInfo. The programme encourages the use of information technology as a teaching tool. The programme provides financial assistance for the installation of technology laboratories in schools and the purchase of digital boards and projectors as well as laptops for teachers and students.

In 2011, the government of Brazil invested \$3.5bn in the National Programme for Technical Courses and Jobs - PRONATEC. The objective of the programme is to offer technical and professional training in order to insert citizens into the labour

market. The courses offered are free, and individuals attending also receive needed food, transport and supplies. In recent years, the government also introduced programmes focusing on enhancing the quality of teacher education programmes. The emphasis was directed at training well-prepared teachers for diverse classrooms.

Another relevant multi-annual plan is the National Plan for Human Rights Education (Government of Brazil 2018), launched by the National Committee on Human Rights Education of the ministry of human rights, including an action programme for all education levels as well as for non-formal education. Human rights education is regarded as a vital instrument for the development of a culture of peace and the strengthening of democratic institutions (Piovesan & Girardi Facin n.d.:20), *a fortiori* in Brazil, as one of the countries with the lowest support for democracy in Latin America (Bertelsmann Stiftung 2018: 14).

■ The structure of the Brazilian education system

Brazil has a decentralised education system. According to articles 23 and 211 of the Brazilian Constitution, the union, the states, the federal district and the municipalities must organise their educational systems in a collaborative way. Thus, the constitution defines that the municipality has the responsibility of childhood education as well as elementary school (initial years) education, while the states and the federal district have the responsibility of high school education but also manage the final years of elementary school. The federal government coordinates the financial and technical issues and is responsible for federal universities (Todos pela Educação 2018).

In 2018, 48.5 million enrolments were registered in 181 900 basic education schools in Brazil. This number represents 1.3 million fewer than in 2014, which means a reduction of 2.6% in total enrolment. On the whole, 47.7% of enrolments were

registered at the municipal level, 32.9% at the state level, 18.6% at the private level and less than 1% at the federal level (Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira [INEP] 2019).

The education system in Brazil comprises both public and private schools and institutions. The attendance of public schools is excellent (around 80% of students), while the number of enrolments in private schools is constantly growing. The scholarly literature informs that the main reasons for parents choosing private schooling are based on higher-quality education, a safer teaching environment and better infrastructure.

The Brazilian education system is divided into two levels: basic education and higher education (LDB Art. 21). Basic education is regarded as the way to ensure to all Brazilians the common formation indispensable for the exercise of citizenship and to provide them with the means to progress in the work and in later studies (LDB Art. 22). Basic education includes three stages and six modalities. The stages are childhood education (4–5-year-olds), elementary school (6–14-year-olds) and high school (15–17-year-olds).

For the LDB (1996):

[C]hildhood education, the first stage of basic education, has as its purpose the integral development of children up to 5 years of age, in its physical, psychological, intellectual and social aspects, complementing the action of the family and the community. (Art. 29)

Daycare is not mandatory; it is from zero to three years old and can be public for free or private.

The 9-year elementary school has two sequential phases with its own characteristics for the initial years (6–10-year-olds or first to fifth year) and for the final years (11–14-year-olds or sixth to ninth year). Article 32 of the LDB (1996) prescribes that the objective of elementary school is the formation of citizen through:

- the development of the capacity to learn, having as basic means the full domain of reading, writing and calculation

- the understanding of the natural and social environment, the political system, technology, arts and the values on which society is based
- the development of learning capacity, with the acquisition of knowledge and skills and the formation of attitudes and values as objectives
- the strengthening of family ties, human solidarity ties and reciprocal tolerance on which social life is based.

The high school is the final stage of basic education and has a minimum duration of 3 years. Article 35 of the LDB (1996) states that following are the purposes of high school education:

- the consolidation and deepening of the knowledge acquired in elementary education, enabling the continuation of studies
- the basic preparation for the student's work and citizenship in order to continue learning so as to be able to adapt flexibly to new conditions of occupation or subsequent improvement
- the improvement of the student as a human being, including ethical training and the development of intellectual autonomy and critical thinking
- the understanding of scientific–technological foundations of productive processes, relating theory to practice, in the teaching of each discipline.

The six modalities of education are indigenous school education, special education, rural education, Quilombola school education, youth and adult education and professional education.

The indigenous school education has its own pedagogy and respects the ethnicity of indigenous peoples. Teachers are trained to respect the specificities of the communities, and the educational units are inserted in their cultures and territories. Although these units have their own characteristics, they must also respect the constitutional principles and the principles that guide the national basic education. In indigenous schools, education is bilingual and intercultural (Secretaria da Educação do Paraná 2019a).

Special education ‘is understood as the modality of school education, preferably offered in the regular school system, for students with special needs’ (LDB 1996:Art. 58). It is applied at all levels, stages and modalities of teaching and must be provided for the political-pedagogical projects of school units. The target audience is students with disabilities, global developmental disorders and high skills (Secretaria da Educação do Paraná 2019b).

The Brazilian Ministry of Education, the state and sometimes non-governmental organisations support education for children with special needs. Such support is provided from preschool to the upper secondary level. Depending on students’ needs (learning difficulties, physical or mental disabilities), schools may include accessible infrastructure, accessible school transport, clinics, rehabilitation centres and so forth. Several programmes are in place to assist students with special needs. In 2011, a legally binding policy, the ‘Brazilian National Plan of Rights of Persons with Disabilities – Living without Limit’, came into effect. As reported by the Zero Project Foundation (2019), the National Plan invested \$1.6bn to implement and strengthen the existing policies to better look after individuals with disabilities. Owing to this commitment, the following accomplishments were possible (Zero Project Foundation 2019):

- A total of 13 360 new multifunctional classrooms meeting special education needs and 20 sign language courses were created.
- Some 40 316 schools improved their architectural accessibility or purchased materials and assistive technologies.
- A total of 2304 accessible vehicles for school transport were purchased.
- As of January 2015, 19021 persons with disabilities have been given priority enrolment in professional education courses.
- An amount of \$37m has been invested in goods and services, such as wheelchairs, Braille printers and so forth.

Basic rural education is aimed at the rural population and the peculiarities of rural life in each region. Its pedagogical actions

are focused on the following three bases (Secretaria da Educação do Paraná 2019c):

- the methodologies and curricular contents directed to the needs and interests of rural students
- the organisation of the school and the calendar according to the phases of the agricultural cycle and climate conditions
- the adaptation to work in rural areas.

Quilombola school education is aimed at the remaining rural communities of Quilombos. In Brazil, the slavery of black people brought from Africa by the Portuguese to work in agriculture began in the 16th century and lasted for about 300 years. In the process of resistance to slavery, distant rural communities called 'Quilombos' were formed. According to Santos et al. (2019), more than 100 years after the abolition of slavery, the Brazilian state took its first steps to repair the historical debt to the descendant population of slaves and guaranteed the rights to the remaining communities of Quilombos in the 1988 Federal Constitution. Thus, this modality of basic education is based on ethnic, cultural, historical and social values related to the Quilombola communities. The Quilombola schools are located in the demarcated lands as Quilombolas and have their own pedagogy and continuous training and are guided by the common national base and the principles of LDB (1996).

The existence of 1209 remaining communities of certified Quilombos and 143 areas with land already titled in Brazil is pointed out. The remaining Quilombola communities have the highest number in the states of Bahia (229), Maranhão (112), Minas Gerais (89) and Pará (81) (Ministério da Educação 2019b).

Youth and adult education is focused on young people and adults who were unable to complete their studies at a young age. It provides educational opportunities appropriate to their characteristics, interests, and living and working conditions through courses and examinations at elementary and high school levels (Secretaria da Educação do Paraná 2019d).

As reported by Ivenicki (2015), a significant number of adults have not acquired basic literacy and numeracy skills during their childhood. Mello and Braga (2018) add that adult women and men without elementary schooling belong to or could be described as a vulnerable group in Brazil. The authors also report that in 2016, Brazil registered a total of 11.8 million non-literate youths and adults, representing 7.2% of the country's population. To that end, adult education in Brazil is considered compensatory or remedial schooling. As of 1988, when the new constitution was adopted, addressing the issue of the high rate of adult non-literacy, it became a state responsibility. The secretary of continuing education, literacy, diversity and inclusion along with the Ministry of Education: (1) provide support for adult education through special courses on top of the mandatory subjects; (2) ensure that there is appropriate guidance if necessary; and (3) take into consideration the disadvantaged groups. The minimum age for enrolment in adult schools, set by the Brazilian educational legislation, is 15 years.

In relation to the rate of non-literacy in the country, according to the Ministry of Education, it has been declining in the past 15 years. However, in 2014, the National Household Sample Survey (Pesquisa Nacional por Amostragem de Domicilio [PNAD]) indicated that 23 million Brazilians over the age of 15 years still could not read or write. Since 2003, the federal government, through the Ministry of Education, with the support of the states, the federal district and the municipalities, has developed the Brazil literacy programme, with actions aimed at improving the literacy of young people, adults and the elderly. One of the objectives of the programme is to raise the average schooling of the population from 8 to 9 years in order to achieve at least 12 years of study and offer at least 25% of enrolment of youth and adult education in primary and secondary education (Ministério da Educação 2019a). Article 214 of the constitution recognises the eradication of non-literacy as one of the main objectives to be achieved by the national educational system.

In addition, both youth and adult education are included in the education modalities considered as promoters of social inclusion, along with special education, rural education, indigenous school education, Quilombola school education, education for ethnic and racial relations and human rights education. The secretariat for continuing education, literacy, diversity and inclusion of the Ministry of Education (aka Secadi) was responsible for implementing actions and programmes related to these issues, but it was extinguished by the current government through Decree No. 9465 dated 02 January 2019.

The last modality, professional education, is given through technical courses, initial and continuing training and teacher training. The technical courses are of long duration (between 800 h and 3333 h) and at the end, the student receives a technical qualification diploma in addition to the high school diploma. Initial and continuing education courses have a reduced workload and do not offer a technical diploma but a certificate for a specific function (Secretaria da Educação do Paraná 2019e).

Higher education in Brazil has two levels: undergraduate, which lasts for 4–6 years and grants a diploma of bachelor, licentiate or technical, and graduate (*stricto sensu*: master's degree and PhD; and *lato sensu*: specialisation).

The undergraduate level admission requires passing an entrance examination, which can be quite competitive and only those with the highest scores are accepted in various programmes. The level up is a master's degree. Completion of a master's degree may take about 2 years of studies. Usually, students are required to complete five to eight courses in addition to a research thesis. A professional master's programme may have additional requirements. For instance, a degree for the teaching profession may call for additional coursework and projects. Next is the doctorate degree, which is the highest degree. Similar to master's programmes, doctoral students are required to complete several courses in their respective disciplines. Then they have to pass a comprehensive examination to gain the rite of passage to undertake a dissertation.

Various types of HEIs are found, including universities, federal institutes of education, science and technology (IFs), university centres, and colleges. The universities are considered to be the most complete institutions of higher education, and they are perceived as being of higher quality. According to Article 207 of the Brazilian Constitution (Presidency of the Republic of Brazil 1988):

[U]niversities enjoy autonomy of didactic-scientific, administrative and financial and patrimonial management, and shall obey the principle of indissociability between teaching, research and extension. (n.p.)

Nevertheless, colleges, which have only the obligation to deliver teaching, are more in number, that is, 2020 (INEP 2017). Colleges predominate (83.3%), followed by universities (8.2%), university centres (6.9%) and, lastly, IFs and federal centres for technological education (i.e. CEFETs; 1.7%) (INEP 2018).

In the census of higher education in 2016, private HEIs presented the majority, accounting for 87.7% of HEIs, followed by state public HEIs at 5.1%, federal HEIs at 4.4% and municipal HEIs at 2.7%. If we consider the number of enrolments, universities rank first, housing 53.7%, second are the faculties with 26.7%, followed by university centres with 17.6% and, last, the IFs and CEFETs with 2.0% (INEP 2018).

In 2017, 6484 courses were distributed in 4345 *stricto sensu* graduate programmes of 447 HEIs. In 2017, the number of enrolments in the master's degree was 129 220, in the professional master's degree 37 568 and in the doctorate 112 004 (GeoCapes 2018). Every four years, the Brazilian Federal Agency for postgraduate education (aka CAPES) evaluates all national postgraduate programmes. The agency is also the main funding institution for Brazilian science (Coordination for Improvement of Higher Education Personnel [CAPES] 2019). In 2017, CAPES awarded scholarships for 47 510 master's degrees, 44 316 doctorates and 7168 post-doctorates as well as 1748 scientific initiation grants (GeoCapes 2018).

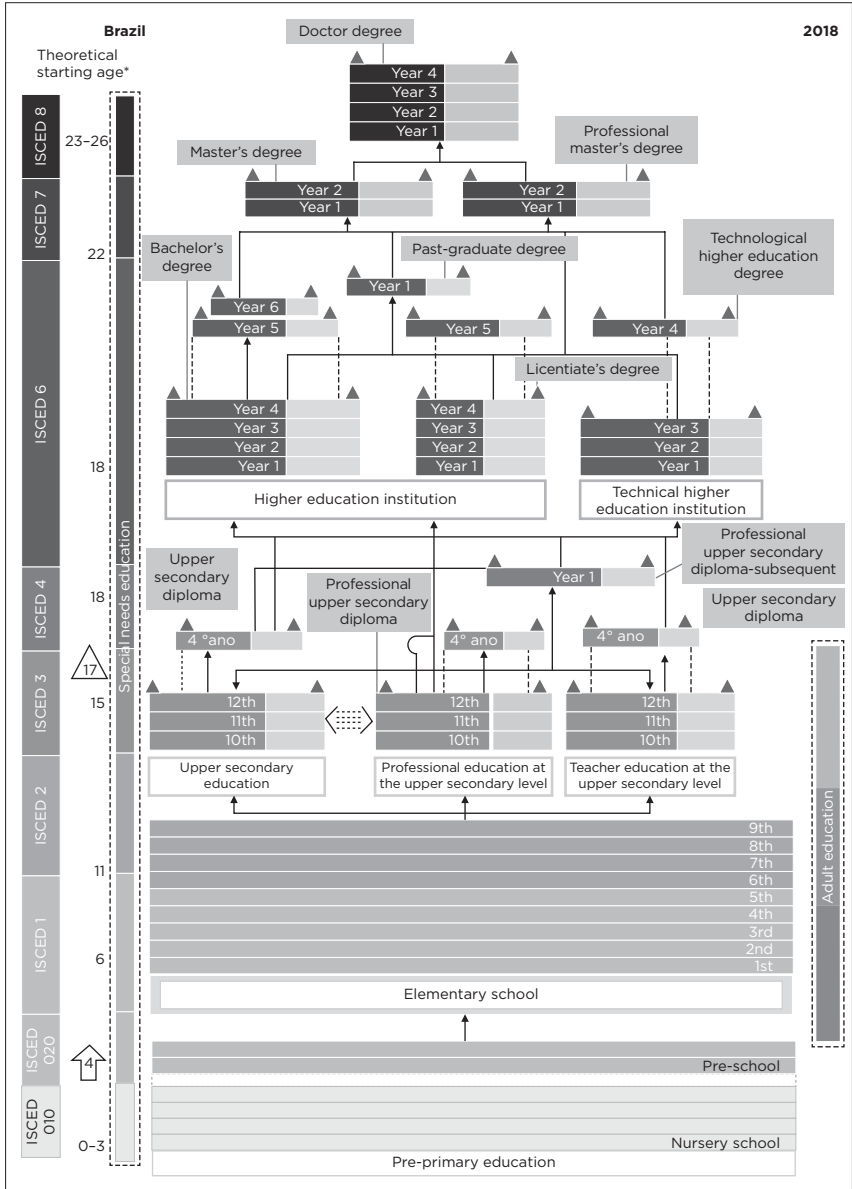
Brazil also has another important research promotion agency, that is, the National Council for Scientific and Technological Development, which is linked to the ministry of science, technology, innovation and communications. One of the programmes funded by both agencies was Science without Borders, created in 2011 under the Rousseff government. This programme aimed to promote the expansion and consolidation of science and technology, increasing Brazilian competitiveness through exchange and international mobility, aimed at undergraduate and graduate students. In 2017, the programme re-orientated its focus only to postgraduate because of budget cuts to education. An overview of the Brazilian education system is presented in Figure 6.1.

The OECD (2018b) report, illustrating that a relatively good quality assurance system is in place in Brazil, has made the following statement:

The external quality process for higher education institutions (HEI) and undergraduate programmes are mandatory and apply to private and federal public institutions. These account for 90% of the over 2400 HEIs in Brazil and enrol 91% of undergraduate students in the country. Three-quarters of undergraduate enrolment in Brazil is in the private sector. The remaining 9% of enrolment is in state and municipal public institutions, which are subject to regulation and quality assurance by state governments. CAPES evaluation applies to all academic postgraduate education in the country. (p. 13)

Although the report is overall positive, it questions some aspects related to the effectiveness of monitoring the quality of institutions and individual programmes. The details regarding this matter are reported in the next section.

Brazil allocates 5.9% of its GDP to education (UNDP 2018), and public education is free in all official establishments, at all levels (Brazilian Constitution Article 206, IV). However, Brazilian education has been undergoing major cuts since President Rousseff left the presidency in 2016. In the same year, Constitutional Amendment No. 95, which limits public spending in social areas to inflation for the next 20 years, was enacted. Several programmes have been reduced or closed down, such as Science without Borders and Pronatec.



Source: OECD (2019).

FIGURE 6.1: Brazil: Overview of the education system, the OECD.

■ **Brazil's achievements and alignment with BRICS**

As stated earlier, the BRICS organisation and thus all member states are committed to the EFA goals. To that end, BRICS works closely in collaboration with UNESCO to increase access to and the provision of education. From the beginning, the director-general of UNESCO, Ms Bokova (UNESCO 2013:n.p.) expressed her support for the BRICS member states that gathered their forces to achieve the EFA goals; 'The BRICS group shines light on a new world that is emerging, on a new map of dynamism, cooperation and action'. As reported by Quacquarelli Symonds (2019), during the 37th session of UNESCO's General Conference in Paris on 06 November 2013, she recognised the BRICS collective potential, stating:

Your countries have enormous potential individually to influence global education trends - this power is multiplied through collective action, through the experience you can share, through your growing roles as development partners, and through the new approaches you are developing for international cooperation. (para. 4)

Prior to discussing the progress of EFA in Brazil, it is important to refer once more to the legal provisions relating to EFA as contained in Brazilian legislation. Article 205 of the Brazilian Constitution (Presidency of the Republic of Brasil 1988) states that everyone has the right to education, and the responsibility for it lies with the state and families. Article 208 points out that access to compulsory and free education is a public right. Article 208 is one of the EFA principles, namely, that basic education must be available to all.

The six EFA goals listed below are briefly put in a nutshell in terms of their achievement in Brazilian education. As evident from the description, the ongoing educational goals in Brazil align with the objectives set by the BRICS organisation and

show progress in terms of EFA goals. However, further improvement needs to be made in order to fully fulfil each one of the goals of:

- expending early childhood care and education
- offering free and compulsory primary education for all
- promoting learning and life skills for young people and adults
- increasing adult literacy
- promoting gender parity and gender equality
- maximising quality education.

The first EFA goal, namely the expansion of early childhood care and education, is a constant challenge, especially in the poorest section of the Brazilian population. Although poverty has been reduced in Brazil, the 0–6-year age group remains the most vulnerable group to poverty. In 2010, almost 15% of this age group in Brazil still lived in extreme poverty (De Beer 2017). School attendance and school enrolment rates have improved over the years, and progress has been made in terms of early childhood care and education. However, not everyone has gained access to early childhood education and care. Daycare and universal education for all still need to be expanded and improved in Brazil.

In terms of the second EFA goal, Brazil has made good progress. Access to primary education has been improved in terms of previous disparities in the provision of quality education for both rich and poor learners as well as in terms of race and colour (De Beer 2017). A remarkable growth in the enrolment numbers of learners with special needs has been reported. However, a phenomenon that is difficult to explain refers to the enrolment numbers of learners aged 6–14 years, which have decreased in recent years. Although the Brazilian population has increased by 30 million people – from 175 786 441 in 2000 to 212 200 713 in 2019 (World Population Review 2019) – the enrolment numbers of the 6–14-year age group have decreased by almost 7 million.

Promoting learning and life skills for young people and adults in Brazil has not yet been achieved. Although Brazil has introduced changes to policy in terms of young and adult learning, the age group of 15–17-year old has not yet achieved the ends as set in the third EFA goal.

Moving to the fourth EFA goal, it is evident that adult literacy in Brazil is not on par with the EFA expectations. Although Brazil has made some improvements over the years in terms of the public education system, the levels of non-literacy still represent a significant shortage in the country. Although the number of non-literates has decreased from 16.3 million in 2000 to 13.2 million in 2012, the consecutive years show stagnate improvement. For instance, the non-literacy rate stands at almost 9% of the population aged over 15 years (De Beer 2017).

The rate is noticeably rising in the north-east area of the country, where the non-literacy rate is 20%. According to the statistics, one in five residents in the northern part of Brazil is non-literate (De Beer 2017). At the same time, it is worth noting that the non-literacy rate in rural areas has significantly decreased in the past 10 years by almost 7% (De Beer 2017). Many scholars argue that Brazilian education has proven to be ineffective over the years and the country is still far from reaching the literacy levels found in other BRICS countries. Several studies have shown that although some individuals may have a good vocabulary, they are not able to comprehend the meaning of a sentence or follow instructions for a basic mathematical process.

Brazil is fairly in line with the fifth EFA goal, which refers to promoting gender parity and gender equality. Gender equality focuses only on the ratio of male to female individuals at specific ages and levels of education. Overall, statistics regarding different age groups show gender parity. There are equal numbers of learners of both genders in the preschool group (0–5 years) and the 6–14-year-old group (Instituto Brasileiro de Geografia e Estatística 2016). However, there are 10% more 12-year-old female learners than male learners who have completed 4 years of

schooling and 30% more 16-year-old female learners than male learners who have completed 8 years of schooling (Instituto Brasileiro de Geografia e Estatística 2016). However, inequality still exists in higher education and the actual labour market. The female representation is strong in careers associated with care and education, while it is limited in science and technology-related areas.

The PISA aims to assess the quality of education in reading, mathematics and science internationally. Brazil has been participating in PISA since 2003, and its performance has been below average. Just to illustrate a few score examples, in the tests administered in 2015, Brazil scored 391 points for mathematics, 410 for reading and 405 for science. The most recent test was administered in 2018; however, the results were made available only in December 2019¹. Compared to the scores of other participating countries, the overall average was 500 points (PISA 2016). In fact, the scores of two-thirds of the participating countries were between 400 and 600. Altogether, it could be said that Brazil has made progress in terms of quality education, yet much still needs to be performed to fulfil the sixth EFA goal.

Connecting to the sixth EFA goal to increase quality education, similar to other member states of BRICS, Brazil has been facing challenges in maximising the quality of higher education. During the 2018 BRICS gathering of education ministers in Cape Town, South Africa, in order to address several common educational challenges, Nkanyane (2018) made the following plans regarding tertiary education:

- strengthening collaboration in technical and vocational education and training through, amongst others, sharing information and frameworks about development is a priority
- the coordination process for the BNU should be supported, and the commitment to the UN's SDG 4, aiming, amongst

1. See https://www.oecd.org/pisa/publications/PISA2018_CN_BRA.pdf.

other goals, to promote lifelong learning opportunities for all, is reaffirmed

- digitalisation and improvement of education and training should be promoted.

As specified in the OECD (2018b:3) report, Brazil's public and private HEIs have a well-established system to assess and monitor the quality of learning and teaching. As indicated in the OECD (2018b) report:

Participation in the external quality assurance system is mandatory for private and federal public higher education institution, which together account for over 90% of undergraduate enrolment in Brazil. The procedures used to assess institutions and undergraduate programmes are wide-ranging, encompassing institutional self-evaluation, peer-review visits, programme-level quality indicators and large-scale student performance assessment. A separate, comprehensive system of external peer-review is used to assure the quality of academic postgraduate education throughout the country. (p. 3)

The OECD (2018b) report, however, brings forward some weaknesses in terms of the assessment and monitoring processes. The conclusive remarks within the report urge the Brazilian authorities to improve the relevance and effectiveness of the regulatory and evaluation processes that govern the market entry of new private higher education providers and undergraduate programmes (OECD 2018b):

First, current quality assurance systems and frameworks can be adapted to make them more effective. In the short-term, measures should include creating a user-friendly online platform to provide students and families with reliable information on the accreditation status and quality of higher education programmes; developing more sophisticated indicators to assess the quality of distance education and monitor its expansion; improving the selection and preparation of peer-review commissions; and taking greater account of pedagogical processes and initial results in on-site reviews of recently created programmes. (p. 14)

It is understandable that each BRICS member state has individual educational aims to accomplish. At the same time, it is obvious

that collaboration amongst member states could lead to educational development on many fronts. For instance, the member countries adopted the coalition's education visions where they support student mobility across their respective nations. This is very helpful for Brazil's plan to maximise by more than 30% the enrolment ratio in higher education before 2020. Such high targets also relate to the awarding of degrees at master's and doctorate levels.

■ **New frontiers: Achieving education's promise**

An overview of the education system in Brazil can be depicted as the metaphor of 'the glass half empty or half full'. The country is gradually enhancing its performance and thus aligning with the BRICS educational objectives ('glass half full'). Unfortunately, Brazil continues to fall behind in terms of quality education systems, with a significant portion of the population being non-literate and low-skilled ('glass half empty').

As reported by the BTTC (2017), overall, Brazil continues to face various challenges at all levels of the provision of education. In 2015, the OECD reported that more attention needs to be devoted to addressing the disparities between Brazil's regions and institutions, mainly in terms of access to and the quality and funding of education. These issues are as relevant in 2019 as they were in 2015. Another reported issue lies in the high levels of grade repetition and student drop-out, the low performance of students from disadvantaged backgrounds and gaps at some levels of education between genders. In short, in terms of these, Brazil is not fully meeting the EFA goals.

Although there has been increasing access of children with disabilities to regular public schools over the past decades, the provision of reasonable accommodation remains a challenge and the National Plan for Inclusive Education has been launched. The country has made efforts to improve indigenous education;

however, indicators reflect the ongoing lack of culturally appropriate services (UN Human Rights Council 2016) and the number of adolescent homicides remains absolutely problematic (UNICEF 2018). It goes without saying that Brazil is one of the most complex countries with respect to education policies and regulations (Ranieri 2012:61).

The world development report (World Bank Group 2018), titled 'LEARNING to realise education's promise', clearly indicates that education is crucial to human welfare, especially in times of rapid economic and social change. The most effective way to prepare young citizens for the future is to place education at the forefront. In order to do so, the education system needs to be accessible and inclusive.

The above-mentioned challenges along with relevant numbers demonstrate the fragility of Brazilian education system. Such fragility calls for the Brazilian government to address identified challenges in order to sustain country's economic growth. It is also important to note that several of the reported challenges in education are because of structural inequalities in the economy, which reinforce gaps in the quality of education (Mami 2013).

These challenges have increased as investments in education have declined. In 2015, in the second term of office of President Dilma Rousseff, the Ministry of Education was the one that suffered the biggest budget cut, in spite of being one of the ministries with the maximum money allocated to it (Portal G1 2015).

Recently, the announcement by the Ministry of Education of a contingency of 30% of the budget of the federal universities and institutes (May 2019), made without objective criteria, has provoked protests throughout the country. Higher education was the area most affected, but the cuts also reach basic education, affecting school transportation, the production and distribution of teaching materials and the fund for the maintenance and development of basic education and the valuation of education

professionals (aka Fundeb) (Portal G1 2019). According to Petrus (2019), this scenario may reduce Brazil's attractiveness in drawing new investments because it shows itself to be an unfavourable environment for scientific, technological and economic development.

In relation to foreign policy, it should also be noted that since 2017, under the Michel Temer administration, Brazil has started to redirect its foreign relations to the so-called developed countries. This trend has intensified in the Jair Bolsonaro government, according to De Souza (2019), which puts in check the positioning of south-south relations, of which Brazil is part and which include BRICS.

For some analysts, this new posture has diminished Brazil's soft power and its participation in discussions on issues in which it was previously recognised as a reference, such as defence of the environment and minorities. Thus, it remains to observe the future steps of conducting the work of BRICS under the Brazilian pro tempore presidency and await the next summit that takes place in November 2019 in Brasília,² remembering that Brazil has gained visibility in recent years because of the creation of BRICS, as highlighted by Professor Marcus Vinicius de Freitas (BBC News Brasil 2019).

2. See http://brics2019.itamaraty.gov.br/images/documentos/LowRes_CNI_CEBRICS_Cupula_EN_1.pdf.

The aims of the Russian education system compared with the education objectives of the BRICS member states

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■ Introduction

The focus of this chapter is on the aims of the Russian education system compared with the education objectives of the BRICS member states. Steyn et al. (2017:14) explain that the collective aim of the education system of a country is primarily to provide the educational needs of the target group or the community at large. The Russian education system is a reformed education system after the fall of the Soviet Union. The education system of the Soviet Union was highly centralised, and indoctrination in the Marxist-Leninist theory was a major element of the curriculum of all schools (ed. Curtis 1996). The need for reform in education was felt in the 1980s. From 1992, the educational aims of Russia have been gradually aligned with the educational objectives of the BRICS organisation. The following aims were published in the Law of Education of the Russian Federation: education must have a humanistic approach with human values as priority; education must take the unity of the federal culture and educational space into consideration; education must be accessible to and adaptable for the effective development and training of all students and pupils; education must have a secular nature in the state and municipal education establishments; education must provide for the freedom of pluralism; and education must have democratic values and must recognise the autonomy of educational institutions. All these educational aims are related to the basic principle of child-centred education. The reason for this chapter is to determine to what extent the above-mentioned educational aims of the Russian Federation have been implemented successfully. Reform programmes in that period called for new

curricula, textbooks and teaching methods. The main aim of these programmes was to create a new education system that would better equip Russian citizens to deal with the modern, technologically advanced nation that Russian leaders foresaw in the future. In this chapter, internal and external determinants of the education system of Russia will be discussed in order to determine their influence on the Russian education system. A further discussion of the educational objectives of BRICS and the educational aims of Russia will inform the readers regarding the strengths of this education system. This will be followed by a discussion on the similarities and differences between the educational aims of Russia and the educational objectives of BRICS. Looking into realities in the education system of Russia will assist to formulate best practices in the Russian education system, and can also be useful for the education systems of other countries. The chapter will be concluded with a brief summary.

■ Education policy of Russia: Educational policy

The Russian education system focuses on the study of sciences, culture, social standards and the behaviour of the young generation. It also concentrates on the relevance of the curriculum, the availability of the workforce and the secular nature of education. According to the Russian Federation Constitution and other Russian Federation legislations on education, the education system is under the statutory and regulatory management of the Russian Federation (Mustafina & Biktagirova 2016). Since November 2007, the Federal State Education Standards (FSES) have complied only with the requirements of the Russian Federation government. According to the new law, the education content of a particular institution is specified by the education programme and can be implemented by the institution itself. This accredited institution has to assure that the education programme that has been introduced will comply with the content of the main education programmes confirmed by the FSES (Mustafina & Biktagirova 2016). From September 2011, the FSES have been

made compulsory for the first grade, from 2015 for the fifth grade and from 2020 for the general secondary grades.

In 2007, compulsory education until the age of 18 years or Grade 11 (whichever comes first) was introduced. Primary general education, basic general education and general secondary education are compulsory levels of education (UNESCO 2011a).

■ Curriculum

According to Nuffic (2015:6), the Russian Federation states that general education requires 34 weeks of study per year, where a week comprises between 27 h and 38 h of study. The curriculum is determined by state requirements and only stipulates the minimum content and workload required by students.

Compulsory fields of study include humanities, social sciences and natural sciences. However, schools have the autonomy to determine their own curriculum, given that it abides by the framework set out for basic education (Nuffic 2015:6). Primary education consists of 4 years of study, where students progress to secondary school, which is another 5 years. By the end of the fifth year of secondary education, students are required to write an examination that assesses whether they have met the requirements of basic education. This signifies the end of compulsory education.

It is important to note that secondary education has two phases, the second phase of secondary education being 2 years in which students need to be examined in at least five subjects, containing two written examinations – composing and mathematics plus three subjects that have been elected. When students leave school, they receive a certificate that reports their grades and modules. This certificate eventually contains anything from 15 to 17 modules. The school-leaving examination consists of a 65% written examination and a 35% oral examination (Nuffic 2015:7). Should students pass this examination, they will be permitted to higher education, either in the field of vocational training or in the field of academic studies (also referred to as ‘professional studies’).

■ Curriculum content

According to the Federal Centre for Educational Legislation (2012), educational aims should centre on the concept that educational activities should focus on personality development, providing the conditions for self-determination and socialisation of a learner on the bases of sociocultural, spiritual and moral values, and according to public norms of behaviour for the benefit of family, society and state interests.

Regarding this definition of education, according to the Russian Constitution, and the external determinant, religion, the curriculum was adapted to incorporate programmes that focus on the tradition and culture of the Russian Federation in the primary education phase. In April 2010, the Ministry of Education added the subject 'Foundations of Religious Cultures and Secular Ethics' in the secondary school phase as an experiment in 19 regional schools. From September 2012, this subject was added to the school curriculum (Starodubtceva & Krivko 2015:211).

The reality in Russia is that the standard of education is remarkably high. It has been found that Russian students have a deeper understanding of literature and history as opposed to their American peers (Hays 2008). In addition, the literacy rate ('literacy' referring to students over the age of 15 who can read and write) has risen to an astonishing 99.7% in 2015 – the majority of Russian population being literate, except for some ethnic minorities. Moreover, according to the 2002 census, a 99.5% literacy rate has been recorded in the population over the age of 10 years (Hays 2008).

■ Internal determinants of the Russian education system: Historical context

To understand education in modern Russia, one has to understand that its origins are embedded in the past. Thus, to grasp this phenomenon, it is indispensable that a perspective of the social history of education must be understood. In this section, the

transformation of the education system in Russia from the 19th to the 20th century is explored in order to gain insights into the workings of this system as it is seen today.

The historical development of the Russian education system has taken an interesting course throughout the past century, from what V.I. Lenin called a 'primitive' country (Dutt 2009), with reference to its state of education and the public being deprived of knowledge. Arising from this statement, Emperor Nicholas II incorporated public education in the list of state priorities in his speech at the opening of the State Duma in 1905 (Andreev 2013:5). Setting this goal into action, adding public education to the list of priorities necessitated that collaboration took place between the top rulers and representative individuals of the public. Furthermore, V.N. Kokovtsev, the chairman of the cabinet of ministers, affirmed that 'primary education falls under the most urgent need among all the state's needs' (Andreev 2013:6). The law that makes primary education available to all citizens was passed in 1912 under the *Ruskaia Shkola*.

From 1900 to 1914, the state budget for education had risen by more than eight times - from £34m to £300m (Ol'denburg 1992). During this period, the principle of continuous education was introduced, eliminating the inequality of the classes, which can be accredited to both the increased budget for education and the concept of continuous education (Andreev 2013:7). This phenomenon gave way to education being widely available to all citizens and no longer being limited to students of noble birth only (Andreev 2013:7). During this revolution, schooling started forming part of the sociocultural process, which dictates that the idea of having an education is no longer reserved only for the bourgeoisie but has shifted to 'a desire to provide their children with the opportunity to get an education higher than simple literacy' (Mironov 1994:4). This shift continued towards education not only being for the corporate interest and professional development, but also being for a social culture (Andreev 2013:8).

The World War II proved another turning point in the Soviet Union, not only in the field of education, but also in more widespread areas. According to Herf (1984), given the vast demographics and access to natural resources of Russia, the country was able to gain power because of its scientific, organisational and technical advantages. Following the post-war period, the number of Russians having an education past secondary school level grew exponentially: in 1913, this group was calculated in tenths of a percentage; during the war, this number rose to 1.5%; and by 1970, one in every 10 citizens fell into this category (Bol'shaia Sovetskaia Entsiklopediia 1977).

In the 1960s, the awareness of education as a resource became prevalent. In the post-war period, large parts of Russia were still influenced by the German standard of education and thus gave way to self-education, which paved the way for modern Russia (Andreev 2013:8). Derived from information from the Taganrog Project, an estimated 55% of the Russian people read books on a daily basis, and 15%–20% read books (including literary magazines) monthly. The significance of this phenomenon is endorsed by the trend leading towards self-realisation (Gustafsson & Nivorozhkina 1996:328). This shift has become known as the 'education society' or, as it is known today, the 'knowledge society' (Andreev 2013:11).

On a note of comparison, during the 1970s–1980s, the transition to a knowledge society intensified even further (Andreev 2013:12). Soviet parents wanted their children to obtain qualities such as having a desire to procure knowledge and good grades; according to Levada (1993), these priorities ranked second in the Soviet Union, while they ranked only 10th in the USA.

In the 1990s, another reform took place in Russia; the market reform had such an influence on the economy that Russia lost a substantial segment of the world market in education, and the trend of sending children abroad to receive quality education was set. Having education at the bottom of the list of priorities again, education in Russia was slowly returning to its original

state, as was the case in 1903 (Forrat 2012). By 1995, to bring this decline to a standstill, the government increased oil and tax prices, following a strike in 1996. The revenue was used to pay teacher salaries and invest in education (Hays 2008). Under the leadership of Putin in the early 2000s, the budget for education rose from ₺583bn to ₺842.7bn per year and teacher salaries increased by up to 40% (Hays 2008). At the same time, the resources of 35 000 public schools were upgraded in the form of receiving computers (Hays 2008).

All aspects considered, throughout the 20th century, the Russian education system has gone through a considerable number of high and low points, with external and internal factors playing major roles. However, Andreev (2013:20) maintains that education in Russia is still seemingly unsatisfactory, as the reform was conjured in the manner of *orgproektirovanie* [organisational and workplace planning – a condescending reference to Soviet-era management]. A rise in social tension has the effect of negative modernisation on education; however, moving into the 21st century, the education system in Russia is still transforming and modernising to meet global standards. Russia being part of the BRICS group plays a major role in the context of education.

The formulation of the Russian education policy can be divided into two main periods: during the Soviet Union and after the dismantling of the Soviet Union. During the period of the Soviet Union, the education system in Russia was highly centralised and theoretically based on the Marxist–Leninist theory, which played a crucial role in the compositioning of the school curriculum. Because of the underfunding and classist factor, a need for revision arose, bringing forth the change in the 1990s. After the collapse of the Soviet Union in the 1990s, the rigid Soviet structure fell away and created unprecedented scepticism about education standards, which eventually gave way to a system that gave local authorities the autonomy to shape and adapt the curricula to the needs of their students (ed. Curtis 1996).

Starodubtceva and Krivko (2015:209) assert that two federal laws govern the principles of the modern education policy, namely, (1) the Law on Education (1992) denotes the 'political and philosophic paradigm of society: they are the overall democratisation of education, pluralism, variability, alternatives, regional character, national self-determination of schools, and accessibility'; and (2) the Law on Education (2012) offers the principles that provide the foundation and mechanisms to implement the new pedagogical paradigm (Starodubtceva & Krivko 2015:210), which include 'humanisation and differentiation of education, developing character and continuity of the curriculum'. According to the National Doctrine of Education in the Russian Federation until 2025, the main principles underlying the basis of education are moral values formed by history, a modern scientific outlook and positive international and inter-ethnic relations. The National Doctrine further declares that the role of education is to ensure the historical progression of generations, the conservation, spreading and expansion of national culture, the harmonisation of cultural relations, the preservation and support of ethnic identity and the preservation of the humanistic culture and traditions of Russia (Starodubtceva & Krivko 2015:210).

Referring to the internal determinant of history and applying this information to the influence this has on the educational aims of Russia, it is essential to acknowledge the changes that the education system has gone through in the past century. Looking at the aim of basic education being compulsory, there has been a striking contrast between the years 2019 and 1919, as being discussed in the next paragraph. During this period, education was aiming to be more accessible to the greater population, where previously it had been seen as a privilege to nobility and the highest social class only. Education was used as a measuring tool to categorise the classes, and looking at the foundation of Russia being built on a Marxist-Leninist theoretical background in 1907, it comes as no surprise that, true to the religious

background of the country (see the section titled 'External determinants of the Russian education system', in this chapter), the social classes were separated by means of education. According to Andreev (2013), education is directly linked to income, as the state and the economy demand literate and educated workers.

After the World War II, education was reformed for the better. Education became more readily available to the masses to be able to rebuild Russia and, in turn, provide the population with invaluable skills, knowledge and values. People gained new insights and thus developed a curiosity for self-improvement – the more they knew, the more they wanted to know. By 1970, more than 70% of the population was considered literate. Not only did access to education make people literate, but it also ingrained in them life skills, moral values and determination – for themselves, their families, society and the state. This revolution, in turn, contributed towards a growing economy that raised the GDP of the Russian Federation.

By 1990, the Soviet Union dissolved, and education in Russia was weakened under the event. With the economy dropping at an alarming rate, qualified teachers left the country in the hope of finding higher-paying jobs abroad, leading to a 'brain drain' (Sharygin 2003:2). The government, in turn, raised taxes and the price of oil to pay teachers more and thereby have qualified teachers return to the country, posing an incentive to enhance the quality of education. The state budget for education almost doubled and, in the process, more resources were made available to public schools and learning institutions.

Article 43 of the Constitution of Russia came into play, making basic education available to all citizens. This law was later reinforced by the Law of Education (2012) to make basic education compulsory for all citizens, which led to the Russian Federation having an average literacy level of 99.6%.

The contextual and historical background of Russia had a significant influence on its education system. The Russian education system was characterised by extremely centralistic control by the government before the dissolution of the Soviet Union in 1990. This central control system allowed no room for autonomy, neither in the education system nor at micro level within schools. Schools and functionaries within the education system were strictly controlled by the state to ensure that only the communist ideology approved by the Soviet Union was promoted in schools. The rigorous central education control system and the disregard of any form of autonomous action by past functionaries caused school management teams to find it difficult to control autonomously. Currently, Russian education authorities are engaged in extensive training programmes to support functionaries working in management positions to manage and control education institutions more autonomously. The decentralisation of control of the Russian education system also enjoys much attention, and programmes have been put in place to give more control to provincial, regional and school management teams.

■ External determinants of the Russian education system

The following external determinants are discussed in this section in order to obtain a better understanding of the Russian education system and the education aims that determine its structure and functioning: language, political trends, socio-economic trends, demographic trends, geography and climate, culture and life philosophy.

■ Language

Russian is the official language of the country, with 260 million speakers, and is stated in the Constitution of Russia as the national language of Russia. There are also 35 other official languages in Russia and 100 other languages that are not seen as

official languages (World Atlas 2019a). Russian is widespread in the rest of the world too and used in the following countries: Russia, Ukraine, Kazakhstan, Kyrgyzstan, Latvia, Moldova, Estonia, Georgia, Tajikistan, Lithuania, Azerbaijan, Uzbekistan and Belarus. Russian is also used by the UN as one of its six official languages (World Atlas 2019). Russian has several different dialects that are geographically defined. Russian Braille is acknowledged as a language in Russia as well. The use of foreign languages is part of the language usage in Russia too and includes the following languages: English, German, French, Turkish and Ukrainian. These languages are mainly restricted to the major cities in Russia (Bradford 2017; World Atlas 2019).

According to a document of the previous Educational Trust Foundation (2012), it focuses more on European standards regarding the promotion of a regional language in education. After 2011, the quantity of subjects and the academic load were increased, which had a negative influence on the time allocation for national languages in schools.

From the above facts, it is clear that linguistic self-identification is a crucial issue in the federal state of Russia. This multinational state depends on how effectively the federal state deals with issues, such as the provision for the teaching of language in the education system (Mustafina & Biktagirova 2016).

■ Political trends

The dynamics of party politics in Russia demonstrated a pendulum-like effect, from 'Feckless Pluralism' to 'Dominant Power Politics' (Gelman 2006). After breaking the equilibrium of the Soviet-style one-party rule, the Russian party system switched to hyper-fragmentation in the mid-1990s, when 43 parties competed for popular votes during the 1995 parliamentary elections. During the 2000s, the pendulum swung back to low fragmentation against the background of the monopoly held by the party of power (Gelman 2006). The most prominent features of Russian politics are the rule

of law and the impact of 21st-century security concerns on the way Russia is ruled. These two features demonstrate how President Vladimir Putin has wrestled with terrorism, immigration, media freedom, religious pluralism and economic globalism, and argue that fears of a return to old-style authoritarianism oversimplify the complex context of contemporary Russia. Furthermore, Russia is still dealing with its legacy of communism and authoritarianism (Bacon, Renz & Cooper 2016). There is much disagreement over the pace and direction of reforms in Russia because of its many political parties (*Encyclopaedia Britannica* 2019). The political parties are reform-orientated, but institutes such as the army and the intelligence services still have a considerable amount of influence and many bureaucrats still are resistant to change. All citizens aged 18 years and above are eligible to vote. Each region has a governor and a head of the regional assembly, who have to appoint a member who will serve on the Federal Council (*Encyclopaedia Britannica* 2019). After 2001, a number of political parties have merged and formed the pro-Putin Russian Party. Women have always played a significant role in the Russian political arena, and the Soviet Congress of People's Deputies required that women form at least one-third of its total membership. After the dissolution of the Soviet Union, the representation of women has declined dramatically and only 10% of the State Duma and 5% of the Federal Council consist of women (*Encyclopaedia Britannica* 2019).

From the above discussion, it can be deduced that the reform of the political situation in Russia presents major challenges to its education system. The change from a socialist ideology to a more democratic political order is not known to roleplaying functionaries within the education system. These functionaries were familiar with a strictly controlled education system that monitored the transfer of the socialist ideology. Autonomous control was unknown, and currently an autonomous and decentralised education system requires role-players to perform their work. Programmes are in place to equip and assist these functionaries to accept self-control and ownership.

■ Socio-economic trends

Russia has a rich variety of natural resources. The development of the mining, metal and industrial industries has contributed to the prosperity of the country (*Encyclopaedia Britannica* 2019), along with the development of oil, gas and other chemical industries. Before the dissolution of the Soviet Union in 1991, Russia had negative economic growth as a result of poor development of consumer goods and industry. After the collapse of the Soviet Union, the Russian economy has turned dramatically and remarkably. The privatisation of industries, the implementation of the capitalist ideology and the exploitation of foreign investment in Russia has formed part of this economic success.

Agriculture contributes only 5% of the gross domestic income of the country and employs about 12.5% of the labour force. The following agriculture products are cultivated in Russia: wheat (main cereal), barley, rye, corn, maize, sunflower, sugar beets, flax, potatoes and other vegetables. Livestock is also an important commodity in the agricultural sector.

The world's largest forests are found in Russia. Lumber, paper and the general wood industry provide jobs to 1 million people and have made a significant contribution to economic development (*Encyclopaedia Britannica* 2019). Wood and wood-related products are exported to the rest of the world.

The fishing industry also contributes significantly to the Russian economy and employment opportunities. Giant fishing vessels and onshore processing plants ensure that the fishing industry is one of the main sources of income and employment opportunities in Russia (*Encyclopaedia Britannica* 2019).

The enormous sources of energy make it possible for Russia to provide affordable and effective energy to its residents and industries. Some of the world's largest coal mines are located in Russia; about 75% of this mineral is mined in Siberia. The privatisation of coal mining has also had a significant and positive

impact on mining, service delivery and the improvement of job opportunities. About 20% of the world's oil is mined in Russia, and approximately 25% of the world's natural gas comes from this country. Most of the natural gas and oil come from the northern parts of Western Siberia (*Encyclopaedia Britannica* 2019).

Large thermal power plants (600) and more than 100 hydroelectric plants and nuclear power plants deliver energy to the country. Hydroelectric power plants operate on the Volga, Kama, Ob, Yenisey, Angara and Zeya rivers. Much of the Siberian electrical supply is exported to Europe via high-voltage lines (*Encyclopaedia Britannica* 2019). Iron ore is one of the main minerals mined in Russia; it is mainly mined in the Kursk Magnetic Anomaly (the Central Black Earth region), the Kola Peninsula, the Urals and Siberia. The largest steel-producing plants are located mainly in the Urals, the Central Black Earth region and the Kuznetsk Basin. Russia produces about 16.7% of the world's iron ore and between 10% and 20% of all nonferrous, rare and precious metals (*Encyclopaedia Britannica* 2019). Examples of nonferrous metals that are mined in the Ural region include cobalt, chrome, copper, gold, lead, manganese, nickel, platinum, tungsten, vanadium and zinc. The country produces much of its aluminium from plants powered by the Siberian hydroelectric stations, but bauxite deposits are relatively meagre.

The social stratification structure of the Russian society has undergone significant changes during its transition from socialism to capitalism (Novozhilov 2005). Nevertheless, Nicholson et al. (2005) argue that socio-economic differentials 'are not well understood' in Russia and the life course approach has been relatively neglected. That being said, socio-economic disparities are of growing interest, as there is proof that recent variations in mortality have affected lower social groups inexplicably (Nicholson et al. 2005). In this chapter, the current circumstances of interest to education are discussed. These are, amongst others, marital status, education and social class.

TABLE 7.1: Current circumstances in Russia.

Variables	Male (%)	Female (%)
Marital status		
Married/cohabiting	74.8	36.3
Divorced/separated	7.6	14.7
Education		
University	21.9	18.6
Secondary/technical	17.0	22.6
Secondary/vocational	28.8	22.3
Primary	32.3	36.5
Social class		
Low	20.3	24.5
Low-middle	37.0	36.0
Mid-middle and above	42.7	39.4

Source: Nicholson et al. (2005).

Table 7.1 presents the current circumstances in Russia.

Marriage in Russia has degenerated and the divorce rate has escalated, resulting in an increased number of single mothers (Portnyagina 2015).

According to the Russia Crime and Safety Report (2019), numerous social problems that have not existed or have been minor during the Soviet period are a substantial problem in contemporary Russia. Unlawful drug use has risen significantly and is growing quickly amongst the youth. Unfortunately, drug use is also accelerating the spread of the human immunodeficiency virus (HIV) because this virus is transmitted mainly by intravenous drug users who share syringe needles. According to the *Moscow News* (2018:n.p.), ‘alcohol poisoning is a leading cause of death, especially from homemade or diluted industrial sources’, as Russians drink great quantities of alcohol.

The total government expenditure on education is 10.87% of the gross budget of the Russian Federation (UNESCO 2015). One of the challenges facing the Russian economy is spending more on the education system. Considering the significant diversity

that exists at various levels within the education system, such an education system also requires much more economic support and spending. The fact that one of the educational aims of Russia stipulates that basic education for all must be free, this requirement also contributes to the economic challenge that the Russian education system is facing.

■ Demographic trends

The present-day population of the Russian Federation is 143 957 776, as of 10 October 2018, based on the latest UN approximations. The Russian population is almost 1.89% of the total population of the world. Russia is number nine on the list of countries by population size. The population density in Russia is eight people per square kilometre (km²) (i.e. 23 people per square mile [mi²]). The total land capacity is 16 376 870 km² (i.e. 6 323 142 mi²). A total of 72.8% of the population is metropolitan (i.e. 104 741 046 people in 2018). The age profile of Russians is summarised in Table 7.2.

Russia has a negative population growth of -0.05% in 2019 (World Population Review 2019). The reason for this trend is that Russians have been experiencing health problems after the collapse of the Soviet Union primarily because of alcohol abuse. Russia is mainly divided into two areas: the central area and the Volga federal area. Further eastwards to Siberia, the population declines drastically (Bradford 2017). The reason for this is the extremely cold conditions in Siberia.

TABLE 7.2: Age profile of Russia.

Age structure in years	Population (%)	Male (Number)	Female (Number)
0-14	17.12	12 509 563	11 843 254
15-24	9.46	6 881 880	6 572 191
25-54	44.71	31 220 990	32 375 489
55-64	14.44	8 849 707	11 693 131
65 and over	14.28	6 352 557	13 958 757

Source: World Population Review (2019).

TABLE 7.3: Ethnic groups of Russia.

Ethnic group	Population (%)
Russians	81
Tartars	3.9
Ukrainians	1.4
Bashkirs	1.2
Chuvashs	1.1
Chechnens	1.0
Not declared	3.9

Source: World Population Review (2019).

Different ethnic groups appear in the country as indicated in Table 7.3.

Moscow, the capital city, is the largest city in Russia, followed by Saint Petersburg. The country has a population density of 8.4 people per km². The densest area of the country is Saint Petersburg and Moscow. Russia is mostly an urban country, with 74% of the population living in urban areas (World Population Review 2019).

Table 7.4 presents the population per city in Russia.

TABLE 7.4: Population per city in Russia.

Rank	City	Population (N)
1	Moscow	11 514 330
2	Saint Petersburg	4 848 742
3	Novosibirsk	1 473 737
4	Yekaterinburg	1 350 136
5	Nizhny Novgorod	1 250 615
6	Samara	1 164 896
7	Omsk	1 153 971
8	Kazan	1 143 546
9	Chelyabinsk	1 130 273
10	Rostov-on-Don	1 089 851
11	Ufa	1 062 300
12	Volgograd	1 021 244

Source: World Population Review (2019).

The population in the cities has increased over the past 10 years because of better work opportunities in the cities (World Population Review 2019).

Most of the international student population occurs in the following areas (Ministry of Science and Higher Education of the Russian Federation 2019):

- Central Russia: 43.6%
- North West: 17%
- Siberia: 14.4%
- Volga: 10.5%
- Southern Federal Districts: 8.4%

The total learner enrolment in Russia is given in Table 7.5.

Education is compulsory for all learners between 7 and 17 years old. Out-of-school learners total 146 591. Learners that have to repeat a year in primary school are 0.28% of the total enrolment. The percentage of learners that are effectively promoted from primary to secondary schools is 99.94% (UNESCO 2015). There are only 384 470 illiterate citizens in the age group of 15 years and older.

Migration is one of the most vigorous ways in which populations can respond to changing socio-economic situations. In fact, it is a litmus test and a measurement of the condition of a society. Changes unfolding in a society are reflected in migration promptly, accurately and quite vividly (Andrienko & Guriev 2004). An analysis of migration allows for the timely detection of new opportunities in the development

TABLE 7.5: Total learner enrolment in Russia.

Phase	Learner enrolment	Age (years)
Pre-primary	7 126 409	3-6
Primary	6 443 358	7-10
Secondary	9 702 911	11-17
Tertiary	7 556 387	18-22
Total	30 829 065	

Source: UNESCO (2015) and World Bank (2016).

of a country and is particularly important when the country in question is experiencing a profound transition. According to Andrienko and Guriev (2004), the source of falsifications in Russia is its system of containing mobility from countryside areas and small towns to urban areas. The reins enforced on movement to major cities resulted in the significantly faster growth of the population in unrestrained cities. The sad reality of the Russian government is that it banished criminals and the (willing) jobless from major cities, which led to significant incongruities in living conditions and crime levels. As a result, these legacies have created a large potential for migration from the northeast of Russia to the European part of the country (Andienko & Guriev 2004).

The diversity of ethnic groups in Russia and the spread of the population across this vast country present major challenges to the Russian education system in order to meet the educational aim, which stipulates that education should be available to all residents and must be free at basic level.

■ Geography and climate

The location of Russia is very complex. O'loughlin and Talbot (2013) found that there was an indication of the complexity of territoriality. O'loughlin and Talbot (2013) argued that:

[W]hile Russians have struggled not only to make economic and political transitions, they also have had to re-conceptualise their country within a territory for which there are few historical antecedents. The territorial restructuring of the former Soviet Union has altered the geopolitics of Eastern Europe and Russia's Near Abroad. (p. 23)

Of importance to the dialogue on the Russian borders is the existence of roughly 25 million ethnic Russians in neighbouring states, especially in the eastern Ukraine, northern Kazakhstan and Estonia.

According to Hays (2008), the climate of the massive Russian terrain ranges from grasslands in the south to humid continental in a considerable region of European Russia to subarctic in Siberia and tundra climate in the polar north. Winters in Russia vary from cool along the Black Sea coast to frigid in Siberia. Summers vary from warm in the steppes (grasslands) to cool along the Arctic coast. The climate of this large country differs amongst its various regions. Most of the country has a continental climate, and it is pleasant to live in some regions. Central heating is found in virtually all public places, such as schools, residences, restaurants and museums (*Encyclopaedia Britannica* 2019; Ministry of Science and Higher Education of the Russian Federation 2019). The winters (and even autumns) are very cold, and warm clothing is extremely important.

The different temperatures per region are shown in Table 7.6.

Small parts of the country are south of 50° north latitude and more than 50% of the country is north of 60° north latitude. This is the reason for extensive regions experiencing 6 months of snow cover over subsoil that is permanently frozen

TABLE 7.6: Temperatures in Russia.

Federal districts	Administrative capital	January climate (°C)	July climate (°C)
Central Federal District	Moscow	-9.4	+18.2
North-Eastern Federal District	Saint Petersburg	-12.4	+14.3
Southern Federal District	Rostov-on-Don	-4.2	+22.3
North Caucasian Federal District	Pyatigorsk	-4.1	+21.6
Volga Federal District	Nizhny Novgorod	-13.4	+19.2
Ural Federal District	Yekaterinburg	-19	+17.3
Siberian Federal District	Novosibirsk	-22.6	+15.5
Far-Eastern Federal District	Khabarovsk	-23	+14
Crimea Federal District	Simferopol	+1	+35

Source: Ministry of Science and Higher Education of the Russian Federation (2019).

(*Encyclopaedia Britannica* 2019). Russia has only two seasons: summer and winter. Summers have moderate temperatures, but winters are extremely cold. Cold temperatures make road transportation very difficult, and routes are often redirected. The most popular summer resort area in Russia is at the Black Sea, with subtropical conditions. Extreme windy conditions are also likely to occur in this country, caused by the high- and low-pressure systems.

The lifestyle of the Russian population is profoundly influenced by the long and intense winters. Special modifications have to be made to machinery, clothing, buildings and road constructions (*Encyclopaedia Britannica* 2019). This reality does not have a favourable impact on the economy of the country and causes the cost of living to be significantly higher than in the rest of Europe. Russia has a relatively small coastal area, which causes the country to have poor rainfall conditions (*Encyclopaedia Britannica* 2019).

Russia is divided mainly into five natural zones: the tundra zone, the taiga or forest zone, the steppe or plains zone, the arid zone and the mountain zone. Most of Russia consists of two plains: the Eastern European plain and the West Siberian plain. In addition, the country consists of two lowlands: the North Siberian and the Kolyma (a north-eastern Siberia land) lowlands. It has two plateaus: the Central Siberian Plateau and the Lena Plateau to its east. A series of mountainous areas appears in the extreme northeast or is extending intermittently along the southern border (*Encyclopaedia Britannica* 2019). The country stretches over an area of 17 098 242 km².

About 10% of Russia is treeless and known as the tundra. This Siberian treeless area is known for wild reindeer that are found here. Only 1% of the Russian population lives in this area. The fishing industry and the oil and gas plants provide work for the inhabitants of this area (*Encyclopaedia Britannica* 2019).

The taiga area has the world's largest forests and is about the size of the USA. It features coniferous spruce, fir, cedar and larch.

Because of its long winters, this area is considered as one of the coldest areas in Russia (*Encyclopaedia Britannica* 2019).

The steppe is described as the most descriptive landscape of Russia. It is not rich in trees but has grasslands and large mountain ranges. The steppe is the most favourable area to survive in Russia because of its moderate temperatures, farming opportunities, sunshine and rainfall (*Encyclopaedia Britannica* 2019).

Russia has nine mountain ranges. The Urals are known for its mountain ranges bringing about a natural separation between Europe and Asia (*Encyclopaedia Britannica* 2019).

Russia has thousands of rivers, making it a water-rich country. The Volga is the longest river in Europe and the main commercial waterway in Russia. The Kama River is the second most important river in Russia and offers jobs and accommodation for a significant number of people (*Encyclopaedia Britannica* 2019). Lake Baikal is the most prominent freshwater lake in Russia and also the world's deepest and largest inland lake. This lake holds 85% of Russia's freshwater and 20% of the world's freshwater. The lake is 632 km long, 59 km wide and 1713 m deep (Bradford 2017; *Encyclopaedia Britannica* 2019).

From the information given above, it can be acknowledged that this large country with its wide variety of geographical areas, each with its own unique climatic conditions, has a major challenge in delivering effective education to all of its inhabitants. Extreme temperatures and weather conditions, as well as remote areas, cause problems in providing access to schools in Russia, resulting in the cost of education, both for parents and the state, to increase significantly.

■ Culture

The Russian population has a preference for literature, ballet, art, painting and classical music (Bradford 2017). Russians place a

high premium on patriotism and close family ties. The communist influence and practices before 1991 caused Russian families to strongly support one another, and friendships had a high priority. These close family ties and friendships ensured survival under the communist ideology (Bradford 2017).

The Miriinsky Ballet Company is one of the world-renowned ballet houses in Russia. The works of well-known writers such as Leon Tolstoy (*Anna Karenina* and *War and Peace*) and Fyodor Dostoevsky (*Crime and Punishment* and *The Brothers Karamazov*) are still read by thousands of literature enthusiasts (Bradford 2017).

Russia is known for the Matrioshka dolls manufactured here. These dolls depict the culture and traditional dresses of the Russian population and contain particular detail of these traditional dresses. The wood-carved dolls consist of six or more dolls that fit into one another from large to small (Bradford 2017).

Colourful painted domes from the time of Ivan the Terrible are still gracing Russian cities. The domes are found in groups of three, depicting the Holy Trinity. The onion-shaped domes of St. Basil's Cathedral in Moscow are emblematic of Russian architecture (Bradford 2017).

Borshch is a well-known traditional soup dish consisting of beetroot, vegetables and meat served with a dollop of sour cream. Another traditional dish is *pirozhkis*, consisting of small baked buns, filled with potato, meat, cabbage or cheese. Caviar or *ikra* (eggs of sturgeon), found in the Black Sea or the Caspian Sea, is served on dark, crusty bread or with *blini* [pancakes]. *Blini* is also served and filled with cheese and onions or chocolate syrup (Bradford 2017). The traditional liquor of Russia is vodka, which is distilled from potatoes. Beer and tea are also considered as traditional drinks (Bradford 2017).

Traditional folk tales stem from Slavic myths and traditions. Well-known examples of these folk tales are *Baba Yaga* and *Fire Bird*. According to the uses of the Russian Orthodox Church, Christmas is celebrated on 07 January, while others celebrate it

on 25 December. Russia Day is celebrated as the independence of Russia on 12 June.

There are seven unique characteristics about Russian culture (Vainberg 2018):

- Because of the turbulent history of Russia, people are being trained to be guarded and will not smile at a stranger. When people know one another well, they are hospitable and friendly.
- Russians are very superstitious and will, for example, observe silence when preparing for a journey to prevent adversity.
- Giving gifts to someone known to one is highly appreciated. Small gifts for children are also appreciated.
- Many Russians have a summer house [dacha] donated to particular families in the 17th century. These summer houses are visited during the summer months.
- Respect for different cultures, religions, languages and traditions is considered a priority.
- The thumbs-up or okay sign are considered obscene and should be avoided at all cost.
- Visiting a sauna is one of the most popular practices in Russia. It is regarded as a discharge of tension.

Wegren (2005) explains that the Russian household is reliant upon all of its members. Most households are small, often with only a single child, because most women have to work outside the house, in addition to bearing the sole accountability for household and child-raising chores. Russians are patriotic and proud of their country; in partisan songs and poems, the virtues of their birthplace are praised. Until the 1930s, Russian life was focused on the agricultural village cooperative, where the land was held in collective and decision-making was the jurisdiction of an association consisting of the heads of families. This kinship for the group and the collective spirit are still remaining today. It is realised in everyday life; for example, most Russians will join a table of strangers rather than eat alone in a restaurant. Everyone's business is also everybody else's business; therefore, people will stop and tell a stranger when he or she breaks the rules.

Meeting the requirements of different cultures, customs and traditions presents challenges to any education system. Russia, like the other four BRICS member states, has a significant diversity of cultures. Under the Russian educational aim that states that no form of discrimination on cultural values and beliefs is permissible, it can be understood that the Russian education system experiences challenges in offering equal recognition to all cultural beliefs.

■ Life philosophy

In Russia, faith has been considered extremely important for many centuries. There are about 5000 different religions in Russia, of which Christianity is the largest (Religion in Russia 2019). More than 50% of the believers in the population belong to the Russian Orthodox Church, with its headquarters in Moscow. About 10% – 15% of the population follow Islam, making it the second largest religion in Russia. The third largest religious conviction is Tengrism, a form of pagan, animistic and shamanic religion. Tengrism originates from the Turk and Mongol populations of Central Asia and has enjoyed a revival in parts of Russia as part of a particular Central Asian ethnic identity at some regional independence movements (Bradford 2017; Religion in Russia 2019). Other religions favoured are the Baptist faith, Seventh-Day Adventism, Evangelicalism, the Old Believers' faith, Roman Catholicism, Krishnaism, Buddhism, Judaism and the Unified Evangelical Lutheran faith (Religion in Russia 2019). Atheism and agnosticism also occur in Russia and form part of its religious history (World Atlas 2019). Over the past few years, the Russian government has been strongly criticised because of its lack of respect for the various religions in Russia. Although the Russian Constitution provides for religious freedom, the opinion is held that not much attention is given to this stipulation. Religious extremist riots readily occur and the Russian Orthodox Church has been called the 'unofficial church of Russia' (World Atlas 2019). According to the data of the Pew Research Centre in 2015, the non-affiliated religions are declining, while the Islamic and Hinduism religions are increasing. The prediction was that the

TABLE 7.7: Major religions in Russia.

Religion	Russian population (%)
Orthodox Christianity: Russian Orthodox Church; Ukrainian Orthodox Church; Georgian Orthodox Church; Belarusian Orthodox Church; Orthodox Church	71
Non-affiliated beliefs: atheism; agnosticism	15
Islam: Muslim	10
Other Christian faiths: Protestantism; Jehovah's Witness; Old Believers; Catholicism; Seventh-Day Adventism	2
Other faiths: pagan beliefs; Slavic folk beliefs and/or Central Asian Shamanism; Buddhism; Judaism; Taoism; Scientologists	1

Source: World Atlas (2019).

100 million believers of the Russian Orthodox Church would decline to 88 million in 2015. A possible reason for these predictions is the decline of the Russian population as a result of low birth rates and a shorter life expectancy (World Atlas 2019). In Table 7.7, the different religions in Russia are depicted.

Any country, as in the case of Russia, that has such a significant variety of religions and philosophies will have challenges in terms of the equal treatment and equal rights for every religion. The Russian educational aims stipulate that equal treatment should be acknowledged for every faith and no form of discrimination on the part of different faiths will be allowed. This educational aim should be implemented with great care and sensitivity at each school in Russia.

■ Educational aims

As mentioned in other chapters (from ch. 1 to ch. 10), a distinction is made between the educational objectives and educational aims of the BRICS member states. During the founding years of UNESCO, this organisation defined the predicted educational aims as 'educational objectives'. In the description of the provision of education in the BRICS organisation, 'educational objectives' are mentioned, while 'educational aims' are mentioned in the

description of the educational provision in the BRICS member states. However, there is no reason for these different names and they do not have different meanings.

■ Educational objectives of the BRICS organisation

As has been mentioned in other chapters, the BRICS organisation defined and formulated specific educational aims to be adhered by its member states. It is of utmost importance for Russia and the other four member states to define and formulate their individual educational aims according to the prescriptions of the educational objectives of the BRICS organisation.

The following BRICS educational objectives were formulated during the fifth BRICS summit in 2013 in Durban, South Africa:

- strengthening cooperation amongst BRICS universities, partnerships and the exchange of knowledge
- the conclusion of partnerships and the exchange of knowledge about technical vocational education and training
- promoting the transferability of educational qualifications amongst the BRICS countries
- the importance of accelerating cooperation with UNESCO for purposes of the EFA objectives.

During the BRICS summit in 2018 (South Africa), the above-mentioned educational objectives have once again been accepted and further strengthened by the following principles (Human Science Research Council 2018) as a set of transversal themes that lends coherence to the programme:

- Education and training for development, with an emphasis on understanding how contexts, policies, institutions and systems shape and distribute educational and training opportunities.
- Ensuring equitable access for individuals to basic, intermediate and high-level learning and skills.

- Development of skills and capabilities in educational institutions and firms in the context of changing technological opportunities and a knowledge-based economy.
- Transitions through education and from education to the world of work.

The above-mentioned objectives hold specific implications for the educational aims of the BRICS member states. Russia will have to pay particular attention to these implications (De Beer 2017):

- Educational aim with regard to higher education: Collaboration amongst universities is a requirement. The identification of universities that should provide better internal cooperation should be addressed within the educational aims of the member states. The criteria that should be met in order to identify these universities should also be clearly formulated. The principle of transferability of qualifications amongst universities requires an alignment programme with regard to curricula, assessment requirements, qualification standards, the duration of obtaining qualifications and the outcomes to be achieved. Establishing centres of teaching and research, supporting joint projects, publishing academic outputs and awarding qualifications are direct results of the educational aim with respect to establishing network universities within the member states.
- Educational aim with regard to vocational and technical education: The exchange of knowledge with regard to vocational and technical education is a requirement that calls for the establishment of a partnership between the member states. The educational aims of the member states should accommodate the demand for skilled workers in the professional and technical labour market.
- Educational aims with regard to the provision of general education: The general uses for the assessment of learning outcomes should be clearly defined in the educational aims of each member state. Comparative research, the promotion of

opportunities for lifelong learning and the opportunity to learn other languages should also be accommodated within the educational aims.

- Educational aims with regard to education policy: Coordination with regard to the composition and design of the education policies of the member states is a requirement for obtaining a uniform policy. Education policies and the educational aims of the member states must ensure economic growth and the expansion of human resources.
- Educational aims with regard to the principle of EFA: The educational aims of member states should accommodate the principle of education for all and research should be conducted to optimise this principle.

■ Educational aims of Russia

During the Soviet period, the education control system of Russia was centralised, and all control, formulation of education policy and educational aims were conducted at the central education management centre. The influence of the Marxist-Leninist theory was evident in the educational aims as well as in the compilation of the curriculum. This ideology and the control system are still causing problems for teachers in putting their own mark on the educational aims and curriculum composition. Teachers are not used to function autonomously and find it difficult to make this paradigm shift. After 1991, during the removal of the Soviet system of government (post-Soviet communism), emphasis was placed on reforming educational aims, teaching pedagogy, educational philosophy and curriculum composition. A lack of funding of the education system and low salary scales for teachers caused many teachers to leave the profession, which had a negative impact on the implementation of the aims of the new education system (Facts and Details 2019b).

The following aims of civic education in Russia are leading the way to ensure education reform in Russia (Bessarabovo, Bokova & Rychenkova 2018):

- securing and respecting individual rights
- the democratisation of school management
- ensuring mutual respect in the overall school community, emphasising responsibility, ensuring constructive communication and encouraging harmonisation amongst all stakeholders
- creating a school environment that endorses renewal and self-improvement and provides its own control within the parameters of democratic values
- establishing ideals and good values with learners, ensuring a reason for right of existence and gaining knowledge and insight of man
- studying Russian history, art and culture as well as science and world values
- creating a sense of creative consciousness of work
- creating a sense of a health-creative culture and family.

The following educational policy principles are recognised in the educational aims of the Russian education system (Study in Russia 2018):

- Diversified personal and student development considering common human values, observance and respect of rights and freedom
- Support of national identities through the state policy of cultural diversity
- Secondary and higher education available to all categories of citizens and with no tuition fee
- Combination of the management of public and state schools and universities, aimed at their support and development
- Secular education in the whole system of municipal and state educational institutions
- Support for innovations and flexible educational processes to meet the demands of the labour market

- Preparation of on-demand economy specialists who will be able to implement their potential in developing industries. (n.p.)

The main purpose of the Russian education system is to ensure socio-pedagogical support for the formation and development of a moral, responsible, creative, proactive, competent citizen or Russia for life in a democratic state and civil society. Responsible learners and adults should have a particular amount of knowledge and skills, a system of democratic values and the willingness to participate in the socio-political life of the school and local communities (Bessarabovo et al. 2018).

The educational structure of the Russian education system, which makes provision to obtain the above-mentioned aims, can be summarised as follows: Article 43 of the 1993 Constitution, asserting that ‘basic general education is compulsory’, guarantees the right to education – preschool, basic and secondary school education must be free and accessible and of professional quality at a public or state institution. Furthermore, the state guarantees that all citizens have the right to university education that is competitive and of high quality (ed. Curtis 1996; Facts and Details 2019). However, the state holds the right to establish the standard of education and to support both self-educational and educational institutions and forms (Starodubtceva & Krivko 2015:209).

■ Similarities between the educational objectives of the BRICS organisation and the educational aims of Russia

It is crucial that every BRICS member state ensures that the educational aims of the country are consistent with the basic content of the educational objectives of the BRICS organisation. According to the literature, the Russian educational aims largely correspond to the educational objectives of the BRICS organisation.

According to the literature analysis, the following similarities between the educational aims of the Russian education system

and the educational objectives of the BRICS organisation have been established:

- The educational aim with regard to vocational and technical education is well established in the Russian educational policy.
- Educational aims with regard to the provision of general education for all citizens in Russia are also clearly stated in the Russian policy documents.
- Education and training for development, with an emphasis on understanding how contexts, policies, institutions and systems shape and distribute educational and training opportunities, are in place.
- Ensuring equitable access for individuals to basic, intermediate and high-level learning and skills is clearly one of the educational aims of Russia.
- Development of skills and capabilities in educational institutions and firms in the context of changing technological opportunities and a knowledge-based economy are also emphasised in the Russian education policy documents.
- Transition through education and from education to the world of work and economic growth is one of the main priorities in the education system of Russia.
- Educational aims with regard to the principle of education for all are well established in education policy documents.

■ Differences between the educational objectives of the BRICS organisation and the educational aims of Russia

Only one difference between the educational aims of the Russian education system and the educational objectives of the BRICS organisation was found to be reflected and identified:

- Educational aim with regard to higher education: collaboration amongst universities is a requirement.

■ Possible best practices

There are a number of good practices in the Russian education system, and it can be beneficial to all the member states of the BRICS organisation to follow these practices, namely:

- securing and respecting individual rights
- obtaining knowledge of the different cultures as one of the main aims of the Russian education system
- implementing the democratisation of school management
- decentralising the education system
- creating respect for diversity at all levels
- creating an autonomous work environment in schools
- providing lifelong education for all
- promoting self-improvement practices in school
- promoting a sense of creative consciousness of work
- creating a sense of a health-creative culture and family
- supporting innovations and flexible educational processes to meet the demands of the labour market
- preparing on-demand economy specialists who will be able to implement their potential in developing industries
- supporting the combination of public and state schools' and universities' management, aimed at their support and development
- striving for diversified personal and student development, considering common human values, observance and respect for rights and freedoms.

■ Conclusion

Russia has one of the world's largest education systems, with a learner population of about 30 million. It has a diversity of cultures, religions, languages and dialects. The educational aim that states that mutual respect is a requirement and no form of discrimination is tolerated makes the Russian education system an example for the rest of the world. Like any other country that

has different forms of diversity, Russia also has some challenges within its education system; however, it has proven that these challenges can be overcome by effective education management and focusing on high integrity, honesty and perseverance. Russia has undergone a phase of education reform, especially with the dissolution of the Soviet Union, and here the country has shown that reform of education can be managed steadily and successfully.

The historical background and the external determinants have a significant influence on the education system of Russia; however, the way in which these historical events and external determinants have been managed and utilised for the benefit of the Russian education system is also a significant achievement. The success of the Russian education system is a consequence of the seriousness with which this education system is managed. However, education spending in Russia should receive more attention, whereby better quality education could be delivered to learners and more favourable salary packages would be provided for teachers.

The aims of the education system of the Federal Republic of India

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■ Introduction

The BRIC organisation is one of the most recent international collaboration organisations and became BRICS in 2010 when South Africa was invited to join it (De Beer 2017). The acronym 'BRICS' refers to the member states, namely, Brazil, Russia, India, China and South Africa, which have similar status as emerging national economies and lead the newly industrialised countries of the world. The BRICS summits from 2009 to 2017 have declared cooperation in different fields and signed memoranda of understanding on different levels, which include cooperation in education (De Beer 2017:112–121). The BRICS educational objectives have also evolved since the first BRICS summit and include higher education, vocational education, basic or general education and education policy. The importance of policy compliance between the BRICS educational objectives and the educational aims of India as a BRICS member state will be evaluated to inform BRICS regarding its progress in this regard. The educational objectives of the BRICS organisation and the educational aims of India will also be discussed and a comparison between these objectives and aims will be presented. The chapter will be concluded with a discussion on the realities regarding education in India, and possible best practices will be formulated.

■ The education system of India

■ Education policy

As in most countries, the Constitution of India distinctly provides guidelines for education. The constitution is the highest authoritative law, and all other legislations (e.g. education legislation) are subject to the Constitution of India (Government of India 2018). Article 15 prohibits any form of discrimination based on race, religion, gender, class and place of birth. Article 21A confirms that the state is responsible for free and compulsory education for all learners between 6 and 14 years of age. Article 28 provides for the right to religious education and attendance at

particular educational institutions, and Article 30 provides for the right of minority groups to administrate their own educational institutions.

The National Education Policy of India (1986, as amended in 1992) was formulated by the National Government of India, focusing in particular on the following educational aims (De Beer 2017):

- Everyone must have access to education, and it forms the basis of material and spiritual development and progress.
- Education is responsible for forming cultural values that ensure scientific cohesion. Education promotes the goals of socialism, secularism and democracy as ensconced in the Constitution of India.
- To ensure national self-sufficiency, education must ensure human resources at various levels of the economy.
- The view that education represents a unique investment in the present and the future of the country is indicated in all points of view regarding the provision of education.

The general aims of the education system of India are to establish change in the behaviour of learners. An acceptable and good personality and positive values of learners are emphasised by these educational aims. Educational aims are amended from time to time to meet the changing needs of society. The educational aims differ from one another and take into account the ages of the learners in the different educational phases. Under Article 45 of the Constitution of India, the education authorities aim to have a universal, compulsory and free education system for learners from 6 to 14 years old.

The following educational aims for primary education (grades 1-8 which includes 6- to 14-year-olds) have been formulated by the National Council of Educational Research and Training (Your Article Library 2019b):

- to master skills in order to receive education in literacy, numeracy and manual skills
- to acquire skills that develop collaboration between the learner and his or her family, the school and the community

- to understand social responsibilities
- to appreciate and respect the different cultural lifestyles of society, focusing on religion and the various cultures of different regions of India and other countries.

In the vision of the National Education Department of India (Vision 2030), the following core concepts of its educational aims are emphasised (Jain et al. 2017):

- developing globally productive citizens
- creating high-order thinking, reasoning and problem-solving skills
- developing emotionally equipped citizens
- developing citizens who are able to adapt to disruptive change
- helping citizens to become positive contributors to the world around them.

To reach the above vision of the education system of India, particular mission statements, in the form of pillars on which the education system rests, are subsequently discussed (Jain et al. 2017):

- Access and equity: Every learner of school-going age has to attend school, and there should be no disparity in the academic outcomes of socially challenged groups.
- Relevance: Teaching should be based on a learner-centric approach, there should be personalised learning paths for learners, there is a need for innovation and experimental learning, and there should be an alignment between the societal needs of the learners and the learning experience.
- Quality: It is important to have regular teacher training and development, there should be outcome-focused teaching practices, the importance of optimal school infrastructure should be emphasised and teaching should be an aspirational career.
- Governance: A differentiated and facilitating regulatory framework should be in place, the focus should be on output-based regulations while encouraging self-disclosure, there should be a visionary school leadership attitude and an engaged community has to be created through education.

■ Education system administration

The administration of the education system of India functions through two entities, namely, the Department of School Education and Literacy, and the Department of Higher Education (De Beer 2017; Government of India 2016b). The general administration within these two entities is further divided into three ministries, namely, the central, the governmental and the local ministry. The central Ministry of Education aims to develop the education system of India and has two departments: the Department of Primary Education and Literacy, and the Department of Higher Education. In these two departments, elementary education and secondary and adult education are found. Further departments within the central Ministry of Education are University and Higher Education, Technical Education, Book Promotion and Copy Right, Scholarships, Languages and Minority Education. Each state in India has its own Ministry of Education, which is governed by a cabinet minister and a state minister. These ministries can formulate and implement their own policies and legislations.

The local Ministry of Education is governed by governing bodies. Each educational institution has its own governing body. These governing bodies consist of business and industrial leaders, regional leaders or central government leaders. The importance of these governing bodies is strongly emphasised, as they are to take responsibility for the success of the educational institutions. The chairmen of these governing bodies are appointed by the government from one of the external members from, for example, the business sector (India Education 2019). The Department of Education focuses on three levels in particular: Secondary and Higher Education, Elementary and Literacy Education and, lastly, Women's and Child Development. The University Grants Commission controls the universities and the Council of Technical Education in India is in charge of technical education, while the National Council for Teacher Education controls all education training (Cheney, Ruzzi & Muralidharan 2006).

■ Educational structure

The teaching pattern used in India is known as the '10 + 2 + 3' sequence. This pattern states that learners should be accommodated in schools or colleges for 12 years, followed by 3 years in higher education. Furthermore, the pattern consists of the first 10 years being divided into 5 years of primary education, followed by 3 years of higher primary education and then 2 years of high school. The last 3 years consist of higher education (Cheney et al. 2006; De Beer 2017). The education system of India provides for 8 years of compulsory education and is divided into grades 1-5 (Primary Phase: 6- to 11-year-olds) and grades 6-8 (Middle Phase: 11- to 14-year-olds).

In the Primary Phase (grades 1-5), the development of the learners' spontaneity, curiosity, creativity and physically active behaviour is the main area of focus (Your Article Library 2019a). In this phase, the national symbols of India are taught to the learners and they are required to master the basic four mathematical operations, acquire scientific methods of investigation, master the mother tongue, appreciate the work, appreciate physical neatness and personal hygiene and acquire collaborative skills with others (Your Article Library 2019a).

In the Middle Phase (grades 6-8), learners sometimes experience adjustment problems in the family as well as in society. For this reason, the focus in this phase is on the social needs of learners, especially the needs of girls. The aims with regard to curriculum composition are the same as in the Primary Phase, but with more in-depth focus on the outcomes. In the Middle Phase, the focus is on the interest in and knowledge of the history, geography and social principles as contained in the Constitution of India. The learning of a second and even a third language also occurs in the Middle Phase. Furthermore, the introduction of Physics, Chemistry, Biology and Mathematics is emphasised in the Middle Phase (Your Article Library 2019a). In the Lower Secondary Phase (grades 9-10), the main focus is on the development of vocational skills and attitudes in particular.

Learners are being equipped to cope with the challenges of a competitive world. In this phase, learners should have the knowledge of Mathematics, Science and problem-solving skills and attain thorough knowledge of technology, farming methods and the industry. In this phase, learners should be able to make a contribution in the following areas: environmental conservation, population management, the development of a proper feeding scheme, and healthcare and hygiene in society (Your Article Library 2019a).

It is disturbing that only 70% of children in this age group (6–14 years old) attend school in India. The typical school day in India consists of 6 h, and if the school day makes provision for two breaks, the school hours will be extended to 8 h. The curriculum is compiled as follows: three languages (English, mother tongue or regional language and Hindi), Mathematics, Science and Technology, Social Sciences, Vocational Training, Arts and Health Education, and Physical Education (Cheney et al. 2006).

The subject composition in the different phases of the education programme is as follows (Cheney et al. 2006):

- Grades 1 and 2: One language (mother tongue or regional language), Mathematics, Health Education and Productivity Training.
- Grades 3–5: One language (mother tongue or regional language), Mathematics, Environmental Studies, Health Education and Productivity Training.
- Grade 6–8: Three languages (English, mother tongue or regional language and Hindi), Mathematics, Science and Technology, Social Sciences, Vocational Training, Arts and Health Education, and Physical Education.
- Grades 9–10: Three languages (English, mother tongue or regional language and Hindi), Mathematics, Science and Technology, Social Sciences, Vocational Training, Arts and Health Education, and Physical Education. At the end of Grade 10, learners obtain a Secondary School Certificate.

- Grades 11–12: Subjects that match the learner’s specific field of study are offered. If a learner wants to study engineering or medicine, subjects such as Mathematics, Physics, Chemistry, Biology, Botany and Zoology will be taken. If the learner wants to study in a Bachelor of Commerce (BCom) field, subjects such as Economics, Accounting and Mathematics will be taken. Subjects such as History, Geography, Political Science, Philosophy, Psychology, languages, Arts and Music may be taken if the learner wants to study in a humanities field. This phase is known as ‘Junior College’.

■ Support services

Eight major challenges are experienced in the education system of India, which need to be addressed in order to successfully achieve the educational objectives of India. Support for learners with disabilities and learning disabilities, as well as their parents and teachers, should receive the necessary attention (Sharma 2015:48–54):

- Learners’ self-determination and self-advocacy: Learners who have skills of inner determination usually make a success of their professional life, adult life and life in the community. Parents, teachers and researchers in India are aware that learners lack inner determination and self-empowerment. Especially learners with specific disabilities experience a vast lack of inner determination and self-empowerment, social skills, communication skills, conflict management skills, career development skills and computer skills.
- Access to the general curriculum of education: Problems are experienced with regard to the nature of the curriculum for learners with special needs. Assessment methods, infrastructure, the medium of education, presentation methods, time allotment for the delivery of the curriculum and the standard of the curriculum pose deficiencies observed in the education system of India.

- Increasing the school completion rates of learners with disabilities: About 36% of learners with particular disabilities leave school before the expected age. Various reasons have been identified as attributing to this high rate of failure, namely, incorrect diagnosis of the problem, a lack of infrastructure and accommodation, insufficient curriculum and support programmes for parents, teachers and learners.
- Decisions regarding career choices: Learners with disabilities are not being sufficiently guided to make the appropriate decisions regarding the correct and suitable occupation for themselves.
- Access to post-secondary studies: Learners with disabilities do not have sufficient access to opportunities for post-secondary studies.
- Parental guidance: Inadequate parental guidance is the order of the day with regard to assistance and support to learners with disabilities.
- Collaboration: A lack of cooperation amongst different institutions creates a problem for learners with disabilities. Examples include the vision of the learner, parent and school differing from one another; inadequate knowledge and information of learners with disabilities; poor guidance to parents and learners who have to make decisions about their careers and the nature of training; and the lack of active contribution by the state in developing opportunities of learners with disabilities.
- Workforce of learners with disabilities: Very little is done and planned to accommodate learners in the workforce of India.

There are various reasons for the assistance to learners with disabilities and learning disabilities in India not being satisfactory (Limaye 2016):

- Parents' attitude towards these learners is not positive.
- Very few teachers are being trained to teach learners with special education needs.
- Poverty in especially rural areas causes these learners not to attend schools.

- The attitude of the community towards these learners needs to be improved.
- Better facilities are needed.
- More role-players should address the needs of these learners and teachers.

The quality of teaching provided by teachers is not desirable; this trend is because of insufficient teacher training and support to practising teachers (Borah 2012). A shocking 25% of the total teacher positions is vacant and 57% of college professors do not have a master's or a doctoral degree (Borah 2012). Because of the inadequate support services for teachers in India, teachers leave the profession and consider other jobs.

The quality of education facilities at private and state schools differs substantially from one another, and support services for education events in this case are insufficient (Borah 2012). A shortage of educational institutions complicates the provision of education in India. Within the existing educational institutions, there is a shortage of laboratories and technological infrastructure (Borah 2012).

■ Internal determinants of the education system of India

Internal determinants consist of those that exist within the education system and have an influence on the development thereof. There are three types of internal determinants: historical, reciprocal and educational (Steyn et al. 2017). For the purpose of this chapter, the focus will be on the historical nature and development of the education system of India.

■ Historical nature of the education system of India

Like countries, the history of India has influenced the education system substantially. From the ancient times, the Hindu faith has played a significant role in the teaching of learners and the needs of Brahmin being met. As an earlier British colony, the education

system of India was dominated by the state and much more focused on higher education than on primary education. This trend has led India to create a huge non-literate workforce, and to this day, the scars of this view can be perceived. Education, especially higher education, was meant for higher social classes, and only in exceptional cases for ordinary learners from the middle and lower classes. Because of this, the higher social classes enjoyed better qualifications and held better jobs, which ensured a better income (Cheney et al. 2006).

Different education systems in different regions of India make the distinction between ancient, medieval and modern education. Education was not meant for the personal enrichment of the individual, but for the social benefit of all residents. Education in India was characterised by strong social traditions, philosophies, cultures and customs. In the Vedic periods, subjects such as Grammar, Mathematics, Mineralogy, Logic, Moral ethics, *Brahmavidya*, Knowledge of Atman, Assertiveness and Science were presented (Singh 2017). During the Mauryan and Gupta empires, world-class universities were set up, attracting students from all over the world. In the medieval period, the Muslim faith dominated education and emphasis was placed on the moral and spiritual education of learners (Singh 2017).

In 1835, English was used as the language of instruction under British rule. In 1844, English was declared the compulsory language medium for government officials. English was very popular as a language of instruction in the schools in India. English received the credit for improving the education and training of the community of India. It gave the British government power over the general control of India. In the 20th century, modern education gave more power to the middle- and lower-class workforce and resulted in a large number of visionary leaders, thinkers and intellectuals. These leaders aimed to save India from poverty. The British regime, however, caused India to be divided into different groups of people in society, characterised by their own views, without the possibility of reaching compromises. Racial discrimination was the result of policies

characterised by oppression and unilateral enforcement (Singh 2017). This led to the disintegration of the community of India (Singh 2017).

Few changes occurred in the education system of India after its independence in 1947. Karl Marx claimed that the British government had two aims in India, namely, the destruction of the Asian society and culture, and the building of a more Western point of view and culture in Asia. Educational institutions were controlled by British officials according to Western influences and traditions. The education system under British rule was characterised by high moral values, humanity and uniformity amongst all people. The British government considered education as important, as it was perceived as a prerequisite for the training of politicians and the development of the economy of India. The education system under the British government had four objectives: the acquisition of a good qualification (such as a degree), physical fitness, high moral values, and technical and practical training. After independence, it was established that these aims had not been achieved successfully. Thus, in the five-year plan (1951–1956), the following objectives were set:

- Social education: Literacy, general education, leadership training and social skills
- Gram Shikshan Mohin: Basic literacy for people in urban areas
- Training of farmers in basic literacy and farming methods
- Non-formal education for people in the age group of 15–25 years, including basic literacy
- Polyvalent adult education centres: Adult literacy programmes in more remote or rural areas.

This five-year plan had been expanded and was implemented until 1977.

The community of India developed an antagonism against the British-driven education system, as this system was not in line with the culture of India, lifestyle and traditions. Quality education has disappeared from state schools, and the cost of private education has caused many people in India not having access to

affordable education. In the report of the Education Commission in 1968 (1964–1966), under the guidance of the then prime minister Indira Gandhi, it was recommended that there should be a radical education restructuring in the first National Education Policy, which should ensure equal access to education for all in order to guarantee national integration with regard to cultural and economic progress. In 1986, the new education policy of India condemned all forms of inequalities, especially regarding education for women, and recommended vocational education and adult education (Singh 2017). This education policy supported learner-centred education. In 1992, the Central Education Advisory Council recommended that free and compulsory education for all 6- to 14-year-olds should be introduced; in 2002, this was incorporated into primary education as a basic human right in the Constitution of India (Government of India 2018). Currently, the education system of India is undergoing various changes because of the globalisation programme for education in both developing and developed countries (Singh 2017).

■ External determinants of the education system of India

External determinants are those that affect the education system from the outside and thus have an influence on the nature and development of an education system (Steyn et al. 2017). The following external determinants are discussed for the purpose of this chapter.

■ Language

India has about 1650 different languages and dialects, with 23 official languages (Assamese, Bengali, Bodo, Dogri, English, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Maithili, Malayalam, Manipuri, Marathi, Nepali, Odia, Punjabi, Sanskrit, Santali, Sindhi, Tamil, Telugu and Urdu) and hundreds of other dialects being used (Garg 2018). Although 780 different languages existed in

India, 250 of these have disappeared in the past 50 years. The two official languages used are Hindi and English. Hindi is the medium of about 41% of the population (1 billion people). English is mostly used as the language of instruction at HEIs and is a remnant of British colonisation in India. English is used by approximately 350 million people in India and is the language used in the business sector (Cheney et al. 2006; India Guide 2019). From this description of the languages and dialects in India, it can be deduced that India has a significantly diverse language community, which considerably hampers the provision of education in the language preference of the learner.

■ Political trends

India has a federal government structure and is a democracy consisting of 28 states and seven union territories. India is known as 'the Republic of India'. It has the largest number of political parties in the world. Political corruption occurs, including bribery, nepotism, extortion, cronyism, patronage, graft and embezzlement (Borah 2012). The president is the head of the country holding executive authority. The prime minister of India is responsible for the general administration of the country. India has a central government system. A government election is held every 5 years. Within the government there are two houses: the Lower House (Lok Sabha) and the Upper House (Rajya Sabha). The president of the country is elected by these two houses as well as the legislators. Only in the past few years, 33% of women have been admitted as members of parliament. Each state has its own legislator, and some of the states have their own houses. Elections in these states are held every 5 years. The head of each state is known as the 'chief minister', who is a member of the Lower House as well. The governor, who is directly appointed by the central government, appoints the chief minister. The chief minister of the state has more legislative authority at state level than the president, while the president has more authority at federal level. The various political parties may question the decisions of the president and the chief ministers and can even change these decisions (Adaniel 2019).

■ Socio-economic trends

India has one of the fastest growing economies in the world and a workforce of about 509.3 million people (India Guide 2019). Approximately 60% of the workforce is involved in agriculture. Special areas are created to support and expand business development. As a result of well-trained employees in the manufacture of computer software, India earns considerable revenue. About one-third (300 million) of the people in India are from the middle-class income group. There is a substantial difference in income groups amongst various regions. A better income grouping is found in the west and south of India, while Bihar, Uttar Pradesh and Odisha have poorer residents. India has formulated a 5-year plan that provides better funding for primary education in order to reduce the high non-literacy rate. State schools providing free education are extremely poor and, in some cases, consist of tents and one-room schools where 40 learners have to be accommodated. Currently, low-cost private schools are being built in both cities and rural areas in order to provide education to a wider variety of income groups. The total increase in spending on education in India is only 4% per year (Borah 2012). It is gratifying that the World Bank is currently making large amounts of funds available for better provision of education in India (Cheney et al. 2006).

The lower socio-economic status of people in India leads to inadequate food supply for children. Child malnutrition has a significant influence on the physical and cognitive development as well as the mental health of children. The immune system of malnourished children is extremely poor compared to children who get the proper nutrition. Furthermore, malnourished children suffer from deficient motivation, investigative skills and interest. In some districts of India, between 54.5% and 57.65% of children (1-6 years old) are malnourished (Garkal & Shete 2015). Overall, India has four times poor than wealthy residents.

The GDP of India is \$2.049 trillion and the GDP per capita is \$1688. The average life expectancy of the residents of India is only 68.45 years. The unemployment rate of 3.6% of the total

population means that a significant number of residents do not work and earn no income (De Beer 2017). This trend puts enormous pressure on the economy of India and, ultimately, on the spending on education.

■ Demographic trends

India has about 100 000 high and senior high schools that accommodate 30 million learners (grades 9 to 12; 15- to 17-year-olds). Currently, much attention is being paid to the establishment of primary schools, which brings the number of additional primary schools to about 6000 schools. Approximately 115 million learners attend these primary schools. The average ratio of teachers to learners in primary schools is 1:38, while it is 1:43 in high schools. This trend is not conducive to good and quality education. India has a total learner corps of 260 million (Jain et al. 2017). The quality of education differs substantially amongst the various regions of India, as well as between private and state schools. State schools provide free education, while private schools charge tuition fees. The facilities and the quality of education in private schools are considerably better than that in state schools (Borah 2012). About 30% of primary schools in India are private schools. India has about 1.3 billion inhabitants, making it the country with the second largest education system next to China. The population has 32% residents under the age of 15 years. The level of non-literacy varies amongst the regions, with an average of approximately 18% non-literate men and 46% non-literate women (India Guide 2019). The Odisha District has 90% non-literate residents, while Bihar has 39% non-literate residents (Borah 2012 & India Guide 2019). Despite the growing spending on education, there are still 35% non-literate people in the total population of India (Borah 2012).

The constant absence of teachers is a matter of concern, which complicates the education process in India. In 2016 India had a worrying 4.13% drop-out rate of primary school learners, 17.06% drop-out of secondary school learners and 4.03% drop-out of upper secondary learners (Jaganmohan 2020).

■ Geography and climate

India has about 1.3 billion inhabitants on a land size of roughly 3287 million square kilometres (km²). The capital is New Delhi, where the governmental head office is located. India has a federal government system known as the 'Federal Republic of India'. The country's territory extends between the borders of Pakistan in the northwest and China, Nepal and Bhutan in the north. To the east, India borders with Bangladesh and Myanmar, to the west is the Arabian Sea, to the east is the Bay of Bengal and to the south is the Indian Ocean. The Andaman and Nicobar Islands belong to India and are located in the Bay of Bengal. Sri Lanka is located on the south-eastern coast, and the Maldives on the southwest coast (World Travel Guide 2019). The far north-eastern states of India are separated from the rest of India by Bangladesh, as it extends from the Bay of Bengal to Bhutan. India is separated from the rest of Asia by mountain ranges, forests and deserts. The Himalayan mountain range is in the north, the Thar Desert is in the west and the Chin Hills and Patkai ranges are in the east. Two major rivers in India are the Indus River, which flows through the northern area of Jammu and Kashmir, and the Ganges River, which flows eastward (World Travel Guide 2019).

The climate of India changes from one region to another, but it is mainly a tropical monsoon climate, especially in the south, with high temperatures in the north (India Guide 2019). The coolest and most pleasant temperatures are experienced in November to March, with very hot conditions between March and June. Monsoon rains occur between June and October. The west of the Himalayas is particularly cold during July to August, but pleasant from March to June. In the northern plateau areas, intensely hot conditions prevail from April to June, and freezing conditions in winter from November to February. Central India has moderate weather conditions, but monsoon conditions from July to September. West India has moderate weather conditions from November to February, but monsoon conditions from June to September. East India has cooler weather conditions from

October to February, extreme heat conditions from March to May and monsoon conditions from June to October. In the south-western regions of India, pleasant weather conditions prevail from November to March. In the south-eastern parts of India, high temperatures are experienced all year round. In the north-east, pleasant weather conditions occur from March to June and from September to November (World Travel Guide 2019).

■ Culture

India is considered one of the world's most diverse countries. The ethnic composition of India is as follows: Indo-Aryan (72%), Dravidian (25%) and Mongoloid and others (3%). A further subdivision of these ethnic groups is as follows: Brahmins (the intellectuals), Kshatriyas (the soldiers and rulers), Vaishyas (the traders) and Shudras (the servants) (India Guide 2019). The different religions form an integral part of the cultures of India and are composed as follows: Hindu (79.8%), Muslim (14.2%), Christian (2.3%), Sikh (1.7%) and other religions (2%) (India Guide 2019). Family values are highly regarded and structured in a patriarchal manner. The woman submits to her father, spouse and sons. Arranged marriages are common in India (India Guide 2019). The mothers, grandmothers and daughters look after the men and smaller children. The woman has a secondary position in the household.

About 82.14% of the men and 65.46% of the women are literate. According to the culture of India, women are not expected to receive education, especially in the case of higher education. Specific roles are awarded to children and genders, benefitting the boys and men (India Guide 2019). Much more attention should be given to the education and training of girls and women in India (Borah 2012). India has a strong and rich tradition that includes folk dance, sports, distinctive foods (flavoured curry dishes are extremely popular), distinctive clothing and decoration of the women. The artistic processing of metals, carpets weaving, stone carvings, pottery, woodworking

and the manufacture of jewellery are included in India's proud traditions (India Guide 2019).

The following social practices occur in the culture of India (India Guide 2019): keep an appropriate distance between two people talking to each other; men greet each other by hand, but not women; accept invitations to eat together; avoid touching someone on the head; avoid letting your shoes or feet touch someone; gifts are appreciated; no caressing in public; do not show anger; take off your shoes before you enter a house; dress extremely conservatively, especially women; address people by the correct title; exchange business cards; arrive on time at meetings; negotiation during transactions is common; and show respect for your superiors.

Because of the globalisation of education in almost all countries, the danger that exists in India is that the ethos and unique culture of the education system of India may change (Singh 2017).

■ Life philosophy

It is well known in all developing countries that education and training eradicate socio-economic handicaps. Because of the Islamic life view, Muslim people are experiencing a significant deficit in education and training. Muslim believers are the most under-developing communities in India. This deficit is a major concern for all of the communities in India as well as at international level. There are currently 156 million Muslim people in India, who constitute about 14% of the total population (Shazli & Asma 2015). Other minority religions are Christianity, Sikhism, Buddhism and Parseeism, which make up about 6% of the population (Shazli & Asma 2015). However, it is the vision of the Muslim education system (called 'Madarsa education') that does not want to accept modern education as an education system in India. The other minority religions (Christianity, Sikhism, Buddhism and Parseeism) entered into modern education much earlier in India, leaving Muslim believers at a major disadvantage of economic, political, leadership and literacy levels, as well as jobs. Causes such as poor

socio-economic status, insufficient schools, poorly equipped schools, poor access to political and leadership levels, a high rate of early school leavers, a lack of interest in education, the view that girls do not need education, large families and the encouragement of young women to start with a family at an early age hamper the delivery of education to Muslim believers (Shazli & Asma 2015).

In addition to the poor general education and training of Muslim believers, they considerably lack technological skills. The consequence of the impaired opinion of Muslim believers with regard to education and training is that they do not hold good jobs that can ensure a good income (Shazli & Asma 2015). However, it is gratifying that this view of Muslim believers has changed considerably; large numbers of girls' schools are currently being established and parents are being more convinced that their daughters need good education and training (Shazli & Asma 2015).

Hinduism is the main religion in India and has a significant influence on the Indian education system. The Hindu population of India is the second largest in the world (India Guide 2019). This religion recognises the importance of the impact of modern education and training on the economic, social, literacy, leadership and general prosperity of the inhabitants of India (Cheney et al. 2006).

According to Article 28 of the Constitution of India (Government of India 2018), no form of religious practice is permitted in state-funded schools. This legislation applies to any learner or staff of a state-funded school.

■ Educational objectives and educational aims

A distinction is made between the educational objectives and educational aims in the BRICS member states. In the description of the provision of education in the BRICS organisation,

‘educational objectives’ are mentioned, while ‘educational aims’ are mentioned in the description of the educational provision in the BRICS member states. However, there is no reason for these different names and they do not have different meanings.

■ Educational objectives of the BRICS organisation

The following BRICS educational objectives were formulated during the fifth BRICS summit in 2013 in Durban, South Africa:

- strengthening cooperation amongst BRICS universities, partnerships and the exchange of knowledge
- the conclusion of partnerships and the exchange of knowledge about technical vocational education and training
- promoting the transferability of educational qualifications amongst BRICS countries
- the importance of accelerating cooperation with UNESCO for the purposes of the EFA objectives.

During the BRICS summit in 2018 (South Africa), the above-mentioned educational objectives were once again accepted and further strengthened by the following principles (Human Science Research Council 2018) as a set of transversal themes that lends coherence to the programme:

- Education and training for development, with an emphasis on understanding how contexts, policies, institutions and systems shape and distribute educational and training opportunities.
- Ensuring equitable access for individuals to basic, intermediate and high-level learning and skills.
- Skills and capability development in educational institutions and firms in the context of changing technological opportunities and a knowledge-based economy.
- Transitions through education and from education to the world of work.

The above-mentioned objectives hold specific implications for the educational aims of the BRICS member states, and India will have to pay particular attention to these implications (De Beer 2017):

- Educational aim with regard to higher education: Collaboration amongst universities is a requirement. The identification of universities that should provide better internal cooperation should be addressed within the educational aims of the member states. The criteria that should be met in order to identify these universities should also be clearly formulated. The principle of transferability of qualifications amongst universities requires an alignment programme with regard to curricula, assessment requirements, qualification standards, the duration of obtaining the qualification and outcomes to be achieved. Establishing centres of teaching and research, supporting joint projects, publishing academic outputs and awarding qualifications are a direct result of the educational objective with respect to establishing network universities within the member states.
- Educational aim with regard to vocational and technical education: The exchange of knowledge with regard to vocational and technical education is a requirement that needs the establishment of a partnership between the member states. The educational aims of the member states should accommodate the demand for skilled workers in the professional and technical labour market.
- Educational aims with regard to the provision of general education: The general uses for the assessment of learning outcomes should be clearly defined in the educational aims of each member state. Comparative research, the promotion of opportunities for lifelong learning and the opportunity to learn other languages should also be accommodated within the educational aims.
- Educational aims with regard to education policy: Coordination with regard to the composition and design of education

policies of member states is a requirement for obtaining a uniform policy. Education policies and the educational aims of the member states must ensure economic growth and the expansion of human resources.

- Educational aims with regard to the principle of EFA: The educational aims of member states should accommodate the principle of EFA and research should be conducted to optimise this principle.

■ Educational aims of India

Under Article 21A of the Constitution of India (Government of India 2015), free education for all learners (6- to 14-year-olds) is assured. In 1992, the Education Policy of India (1986, as amended in 1992) was amended and three educational aims were formulated in this policy (De Beer 2017):

- Aim 1: Education is a necessity for all residents in India, as it will ensure both material and spiritual development.
- Aim 2: Education has an accompanying role to fulfil. This allows for national cohesion to be created and sensitive perceptions about cultural practices and traditions to be clarified. This aim is further linked to the creation of scientific views that are independent of spirit and mind. This aim is also set on promoting socialism, secularism and democracy.
- Aim 3: Education has a responsibility towards economic development in India, thereby ensuring national self-maintenance.

From the above, it is clear that India regards the provision of education as an extremely important component for the general development and progress of the country.

According to the EFA objectives formulated by the BRICS organisation, free and compulsory education for learners is a priority in each of the five member states. In 2009, India also

accepted the right to education with regard to the Act on Free and Compulsory Education (De Beer 2017):

- **EFA Objective 1: Early childhood education and care**

India was one of the 175 EFA member states that adhere to the principle of EFA (EFA Global Monitoring Report 2015). Since 2001, India has been successfully expanding its pre-primary education programme. The number of 3- to 5-year-olds has increased from 16.7 million learners in 1999 to 35.5 million in 2012. The total number of enrolments of 3- to 6-year-old learners has increased from 13.9 million in 1999 to 41.3 million in 2010 (EFAR India 2014). However, it is a matter of concern that education in this phase is not focused on acceptable quality (De Beer 2017). Learners who received education in this phase are still not ready for school, and their cognitive and language skills are not up to standard (EFAR India 2014).

- **EFA Objective 2: Universal primary education**

The so-called Sarva Shiksha Abhiyan Programme aims to internalise primary education in India. This programme formulated the following four objectives (De Beer 2017): (1) School attendance is compulsory for all learners (6- to 14-year-olds); (2) gender and social gaps should be bridged; (3) universal retention of learners in schools; and (4) elementary education should focus on good quality. Primary schools have increased from 638 738 in 2001 to 858 916 in 2013. Enrolments at primary school have increased from 113.8 million learners in 2001 to 132.4 million in 2013. These figures show that 20.2 million of the net number of learners in this phase are still not attending school. The net entry rate at higher primary and secondary education is even worse. Taking this into account, India still does not comply with the principle of universal education in the Primary Phase (De Beer 2017).

- **EFA Objective 3: Learning needs and skills of young learners and young adults**

The enrolment ratio between the actual number of learners in this age group and the actual number of enrolments of these learners is 76.6% in secondary education and only 52.2% in

higher secondary education (De Beer 2017). This finding indicates that India has not yet successfully addressed these needs of young learners and young adults.

- **EFA Objective 4: Adult literacy**

Of the 1.3 billion people in India, approximately 287 million are non-literate (Census India 2016; De Beer 2017). In 2011, in the age group of 15-year-olds and older, only 69.3% of the people were literate, and in the age group of 7- to 14-year-olds, only 72.99% were literate (De Beer 2017; EFAR India 2014). These statistics indicate that India has not achieved this objective.

- **EFA Objective 5: Gender equality and parity**

In the period 2000–2001, 78 girls were enrolled for every 100 boys in primary schools; in 2013–2014, this number has improved to 85 girls for every 100 boys (De Beer 2017; EFAR India 2014). In 2000–2001, 63 girls were enrolled for every 100 boys in secondary schools, and in 2013–2014, 89 girls were enrolled for every 100 boys (De Beer 2017; EFAR India 2014). These statistics indicate that India is actively addressing this objective, but has not yet reached the desired standard (De Beer 2017).

- **EFA Objective 6: Quality of education**

According to the NAS in India, many gaps still exist in the quality of education in the education system of India (De Beer 2017; NAS 2013). Learners achieved a percentage of 50.4% in Mathematics and 51.4% in language (De Beer 2017; NAS 2013). These results showed that 31.5% of the learners scored between 0% and 40% for language assessment and 35.8% of the learners scored between 0% and 40% for Mathematics. For Environmental Studies, only 35.1% of the learners achieved an average between 0% and 40% (De Beer 2017; EFAR India 2014). The Annual Education Report states that the average reading ability of learners in the education system of India is at Standard 1 level (ASER 2014; De Beer 2017). The World Economy Forum (WEF) has rated the primary education of India at 66th out of 140 countries and higher education at 67th out of 140 countries (De Beer 2017; WEF 2016). According to these results, India does not meet the outcome of this objective.

■ Similarities between the educational objectives of the BRICS organisation and the educational aims of India

The following similarities between the educational objectives of the BRICS organisation and the educational aims of India are found:

- The principle of EFA.
- Education is responsible for national cohesion.
- Education should benefit the economy and ensure self-sufficiency.
- The view of India is that education represents a unique investment in the present and the future of the country is characterised by all points of view regarding the provision of education.

One of the biggest challenges in the successful implementation of the educational aims of the BRICS organisation in India involves the inequalities that exist within the five member states. The following inequalities amongst the BRICS member states, as well as within the different regions or states of the various member states, complicate not only the realisation of all the educational aims of BRICS organisation but also the achievement of the principle of providing equal education for all (UNESCO 2014):

- Poverty in the various regions of India.
- The availability and quality of the infrastructure differ substantially between state schools and private schools.
- The standard of education provision differs not only amongst the different regions of India but also between state schools and private schools.
- Physical access to schools in mountainous and rural areas in particular.
- The discrepancy between the provision of education for the number of boys and girls.

- The variety of languages in India requiring proper mother tongue education complicates the principle of providing equal education for all.
- The diversity of religions and cultural beliefs and practices complicates the principle of providing equal education for all.

■ Differences between the educational objectives of the BRICS organisation and the educational aims of India

The following educational objectives of the BRICS organisation are not clearly formulated in the educational aims of India:

- strengthening the cooperation amongst BRICS universities, partnerships and the exchange of knowledge
- the conclusion of partnerships and the exchange of knowledge about technical vocational education and training
- promoting the transferability of educational qualifications between BRICS countries.

■ The realities in India

Compared to the six EFA objectives, India does not perform well (De Beer 2017), as explained in the following:

- As far as Objective 1 (Early childhood education and care) is concerned, it can be argued that India is performing close to the requirements of this objective. India is ranked amongst the 8% of countries performing near this target. Learner enrolments in this age group (3- to 6-year-olds) have increased from 13.9 million in 1999 to 41.3 million in 2010.
- As far as Objective 2 (Universal primary education) is concerned, India is far below the requirements set in this objective. Attendance of primary education is 88.1% and attendance of junior and senior secondary education is only 64.2%.

- With regard to Objective 3 (Learning needs and skills of young learners and young adults), India fails. Only 76.6% of young learners and young adults have access to further opportunities for higher education and training.
- With regard to Objective 4 (Adult literacy), India fails. Only 62% (about 287 million inhabitants) of the total population are literate.
- Regarding Objective 5 (Gender equality and parity), India also fails. According to the gender equality index, the ratio of girls and boys in primary schools is 78:100. In secondary schools, the ratio of girls and boys is even worse: 63:100.
- As far as Objective 6 (Quality of Education) is concerned, India is performing very far from the requirements set. According to the internal evaluation in India, 47.3% of Grade 3 learners cannot read letters.

The following realities continue to occur in India and present further challenges to the education system of the country. These challenges hamper the achievement of the educational aims of India, as well as the educational objectives proposed by the BRICS organisation (Upalekar 2017):

- Rote learning and memorising of facts are encouraged only to score good marks in the examinations. Promoting the understanding of the facts and implementing these facts are not emphasised enough. The recreation of facts on paper during an examination does not contribute to a good and sufficient education system.
- Learning from textbooks without using any other kind of sources to gain knowledge is neither an interesting experience nor does it encourage any kind of creativity and originality in the learning experience. It furthermore does not enhance critical thinking and the creation of an inquiring mind.
- There is a lack of encouragement for research by learners, and the marks they obtain during examinations are only an indication of the individuals' credibility and intelligence.
- The educational methods that are used in India fail to provide the learners with insight regarding the specific topic

and, more importantly, its relevance in the practical life and needs of the community.

- The general health and well-being of learners are also under unnecessary pressure because of the overemphasis on high scores during examinations.
- A lack of career guidance is experienced in India, and the result of this trend is that learners are not able to mould their future and create a successful career. This trend does not contribute to the needs and wealth of the community either.
- Teachers receive low salaries, and the result of this is that they lose interest in teaching learners. This trend results in unknowledgeable learners who do not contribute to the success of the community.
- The cost of living and the cost of education increase rapidly in India, resulting in a barrier to pursue education and thus not benefitting the community.
- The seriousness and absolute necessity of literacy are not well taken into account in rural areas. Access to schooling is also a barrier and a matter of concern in rural areas.
- Part of the vision and mission of the education system of India is to create self-sufficient and financially secure citizens. Promoting competency and becoming efficient to achieve individual goals and targets are only possible after a slow, steady and uniform educational journey that begins from one's formative years and continues all the way until adulthood.

■ Possible best practices

The following best practices are found to some extent in India, but still need considerable attention to bring them to full materialisation and thus making them an actual reality:

- The principle of EFA. Free and compulsory education for learners aged 6–14 years old will ensure that all children in India will have at least a basic primary level of literacy.
- Equal education opportunities for all are vital to the development of any country. A requirement for the successful

implementation of the education system in India is no discrimination with regard to gender, language, religion, status in society or ethnicity.

- Education is responsible for national cohesion. Knowledge of the various cultural backgrounds, religions, languages, dialects, traditions and customs, as well as knowledge of the geographical and demographic compositions of India will not only establish mutual respect for one another but also ensure national cohesion in India.
- Education should benefit the economy and ensure self-sufficiency. The economic development of India depends on the quality of the education and training of the workforce. Well-trained and literate employees will make a valuable contribution to the economic development of India. With a massive population of about 1.3 billion inhabitants, this principle of thorough training of the workforce is a prerequisite for the economic development of the country; otherwise, India will decline into an economically unsustainable situation. Self-sufficient residents will ease the social burden on the budget of India and meaningfully address poverty.
- The view of India is that education represents a unique investment in the present and the future of the country is characterised by all points of view regarding the provision of education. This view forms a sound framework within which the authority and legislation in India monitor, fund, develop, implement, educate and provide educated teachers and provide fair salaries for educators.
- Gradually moving away from a centrally controlled education system to a more decentralised education system is one of the principles of the education system control that can benefit other developing countries. The degree of autonomous education control in each of the states brings stability to that state, and the education system as well as the curriculum can be adapted according to the economic and social needs of the relevant state.

- Moving away from textbook-based teaching methods and the unnecessary overemphasis on obtaining good marks in examinations and only reproducing facts on paper can significantly improve the implementation of the educational aims in India.
- Emphasising the development of critical and innovative thinking, as well as the development of creativity, can take this education system and its educational aims to a new height.
- Better remuneration packages and development opportunities for teachers will attract better and more determined teachers to the teaching profession.
- Well-planned career guidance programmes offered by experts will address the needs of the community and ensure self-sufficient citizens.
- The seriousness and importance of education and training should be promoted at all levels of society and in all geographical areas of India.

■ Conclusion

India has well-formulated educational aims, but it is understandable that a country with 1.3 billion inhabitants will be confronted by challenges in implementing these aims successfully. The Constitution of India clearly provides for compulsory and free education, but it is not yet fully realised in India. India has a central education system that caters for primary (10 years), secondary (2 years) and higher education (3 years). India has 30 million high school and senior high school learners (15–17 years old) and 115 million primary school learners (6–14 years old). Only 10% of all learners reach HEIs. As far as the support services for learners, teachers and educational events and structure are concerned, India is sadly lacking in this area. In addition, learners with learning disabilities do not receive the necessary attention.

The history of the education system of India has been dominated by the Hindu faith, which had a very strong impact on the delivery of education. Under British rule, India was colonised and Western traditions and cultures dominated the cultures and traditions of India. After independence of India in 1947, the cultures and traditions were re-established in the education system. In 1992, the policy of providing free and compulsory education to learners between the ages of 6 and 14 years old was provided. Only approximately 88.1% of the learners qualifying for primary school and 64.2% qualifying for junior and senior secondary school attend school.

The provision of education in India is currently undergoing significant changes as the education system of India has to meet the requirements of the globalisation of education. India has 22 scheduled languages, of which Hindi and English are the two official languages. With this significant diversity of languages, it can be assumed that the provision of education in India in the language preference of the learners is a significant challenge. India is known as 'the Republic of India' and has a federal government structure. Taking into account the very large population of India (1.3 billion), it is clear that the socio-economic status of the country is under severe pressure. Funding of the education system presents significant challenges. State schools in India are characterised by limited infrastructure and educational aids, while private schools have better aids. Not all learners can be accommodated in private schools, as poverty plays a significant role in the society of India. It is, however, gratifying that the World Bank is prepared to provide substantial funding opportunities to India. The climate conditions in India range from extremely hot to very cold temperatures, with monsoon conditions appearing across almost the entire country. India covers a territory of approximately 3287 million km². The country has a diversity of ethnic groups, with the Indo-Aryan group making up 72% of the population. India also has a wide variety of religions, with Hinduism being the most prevalent.

When comparing the educational aims of India with the educational objectives of the BRICS organisation, it has been found that the education system of India still needs to be improved in many areas. Examples of these areas include better and better-equipped state schools; equal access for all learners (especially with regard to gender); a more decentralised education system (with more autonomy to local school governance structures); universal primary education for all; educational needs of learners and young adults not being met adequately; non-literacy rate of adults; and the lacking of the quality of the provision of education.

Chinese educational aims

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■ Introduction

This chapter links up with the theoretical exposé of educational aims presented in Chapter 4, where three major orientations regarding educational aims, as visible in public and scholarly discourse and national education policies worldwide, were distinguished, namely, a skills development or human capital approach, a socialisation orientation, and a human

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capability orientation. These ideal types were presented as a frame to study the educational aims in various countries, with the final goal that South Africa can learn from the experience of other countries in this regard. China, as one of the BRICS countries, is rising with increasing (economic, demographic and also education-wise, at least as measured by enrolments and enrolment ratios) weight on the global scene. Thus, China seems to be an ideal candidate for such an exercise of comparison. The aim of this chapter was to reconstruct the historically evolved objectives of education in China, with the final aim to determine how South Africa can benefit from the experience of China in this regard.

The chapter commences with an exposition of the societal contextual demands shaping education in China. These include geographical, demographic, historical, economic, political and religious-philosophical contextual forces. The education objectives of China, as they crystallised in each of the historical phases of traditional Chinese society, Western influence, the era of Marxism, the era of Sovietised education and the era of post-1979, are then reconstructed. In conclusion, these objectives are assessed, and the relevance of the experience of China for South Africa is spelt out.

■ Context

According to Wolhuter (2017b):

Comparative education focuses on the education *system*. However, the focus of comparative education is broader than just the education system *per se*. The education system is studied within its societal context and is regarded as being shaped by, or as being, the outcome of societal forces (geographic, demographic, social, economic, political and religious-philosophical). (p. 18)

Not only is the impact of the societal context on education the subject of attention but also the other way round: the societal effects of education, that is, the effect of education on the

economy (e.g. the effect of education on economic growth) or on the social system (e.g. the effect of education on social mobility) and so forth (cf. Wolhuter et al. 2018).

■ Geography

China occupies 9.6 million km², making it the third largest country in the world, after Russia and Canada. It is located in the Pacific Rim, thus in the Asia-Pacific region, stretching from Australia to Japan, and therefore including rising nations such as South Korea, Vietnam, Singapore, Indonesia and Malaysia as well as the Special Administration Region of Hong Kong – thus a surging node on the global scene.

■ Demography

With a population of 1371.2 million (World Bank 2018), China is the most populous country on earth (although fast being caught up to by India, which will probably overtake China within a few years). China has 18.41% of the total global population (Worldometers 2019). The median age of the population is 37.3 years (Worldometers 2019), but it is steadily rising. For decades, the country was known for its ‘one child per family’ policy, and although it was changed to ‘two children per family’ in 2015, the current population growth rate is 0.35 per year (Worldometers 2019). By the best projections, the population will stabilise at about 1.441 billion in 2030, whence it will begin to decline slowly (Worldometers 2019).

■ History

The earliest traces of humanoid habitation in China is *homo erectus* teeth and bones found in 1921 by the Swedish geologist John Gunnar Andersson in the Zhoukoudian Cave, 50 km southwest of Beijing (Roberts 2009:180). This finding is estimated to be 2.2 million years old and came to be known as the ‘Peking Man’ –

very often referred to in the reconstruction of human pre-history. *Homo erectus* in China appeared to have mastered the domestication of fire. Then, there are the oldest fossils of *Homo sapiens* found in China, those from Xujiayao, dating from around 125 000 to 100 000 years ago (Roberts 2009:186).

The 'Neolithic package' of settlement, farming and pottery emerged in China, as elsewhere, in a dispersed space and staggered timeline (Roberts 2009:197). The earliest pottery appeared in China 14 000 to 9000 years ago in South China (Roberts 2008:198). The earliest archaeological signs of agriculture in China were in the area around the Yangtze Kiang Valley, around 10 000 years ago (Roberts 2008:201). The development of a settled way of life was slow and patchy (Roberts 2008:202).

The historic birthplace of Chinese civilisation is in the region around the Yellow River down to the Yangtze Kiang River. On this fertile plain, almost 4000 years ago, the concept of China as an inhabited entity emerged (Marshall 2015:37), and eventually, this would become one of the most densely populated areas in the world.

Between 2852 BC and 2070 BC, China was ruled by a succession of three sovereigns and five emperors. After that, China was characterised by a series of successive dynasties. The first of these was the Xia dynasty, which crystallised around 2100 BC, followed by the Shang dynasty, 1700 BC to 1100 BC, and then the Zhou dynasty, 1100 BC to 500 BC. Then, the central polity disintegrated, and a period known as the 'warring states' describes the political history of 500 BC to 221 BC. By this time, China had already expanded from its heartland towards the Grasslands of Central Asia and Tibet in the southwest.

Power was consolidated again at a centre point by the Qin dynasty, 221 BC to 206 BC. During this rule, the Great Wall of China was built. Next was the Han dynasty, 206 BC to AD 220. During their rule, the 'Silk Road' took form. The term 'Silk Road' was coined by 19th-century German geographer, Ferdinand van Richthofen, as a term describing the networks of exchange linking

Han-dynasty China with the world beyond (Frankopan 2018:2). The Han dynasty was followed by, in turn, the Jin dynasty, the San dynasty and the Tong dynasty. The Tong dynasty was interrupted by the Mongol invasions of the later 13th century, resulting in the establishment of the Yuang dynasty.

The Yuang dynasty was followed by the Ming dynasty (1368-1644). The outward movement of the Silk Road and the navy China had built up was terminated and reversed by the *Haijin* or sea ban, a policy making China an extremely isolated and inward, self-complacent society and government. Originally devised to curb and put an end to incursions from the north and ward off Japanese piracy, the policy was counterproductive. Not only did it result in the demolishing of the fleet, but it also led to black market trade, which in the end would culminate in the 19th-century Opium Wars. The last dynasty was the Qing dynasty of 1636 to 1912.

Ever since the dawn of the (European) age of discoveries in the 15th century, China too would increasingly feel the encroaching presence of European powers – firstly explorers, followed by missionaries and then traders, and then finally the forces of colonial conquest. While China never succumbed wholesale to European rule (colonisation), such as the Americas, Oceania, large parts of Africa and even other parts of Asia (including India), in line with the historically developed sentiments of isolationism and self-complacency, it did find it difficult to stave off the attractions of traders totally, and by means of the Treaty of Nanking, had to cede Hong Kong to the British and open up its main ports to traders. The Opium Wars and Boxer Rebellions followed, and, as Marshall (2015:40) put it, this Western encroachment meant ‘the greatest humiliation the Chinese suffered since the Mongol invasions’. The power and prestige of the ruling house and government were weakened, finally, by the costly First Japan-China War of 1894 to 1895.

The last dynasty crumbled, and in 1912, it was replaced by a (Western-style) republic, headed by the first president, an American trained medical doctor, Sun Yat Sen. He was succeeded

by Chiang Kai Check in 1927. A rift developed in society and in politics between (more Western liberal-democratically minded) nationalist forces under Chiang Kai Check and communist forces under Mao Zedong. The hold of Chiang Kai Check's government was further weakened by the Second Japan-China War (1937-1945), and Mao Zedong's Long March culminated in the driving out of the remaining forces loyal to Chiang Kai Check and the proclamation of the PRC on 01 September 1949, a communist state under Mao Zedong.

Maoism differs from orthodox Marxist communism as well as from Leninist Soviet communism. In contrast to Leninism, which holds the view that a small elite can take over power in the name of the proletariat in an industrialised economy, Mao contended that a communist revolution can occur in an agrarian, pre-industrialised economy (thus, also differing from Marx's belief that industrialisation is a prerequisite for a communist revolution to take place). However, Mao differed from Lenin's idea of an elite taking over in the name of the proletariat, and he (Mao Zedong) believed that the peasants could be mobilised for a communist revolution. His version of communism corresponded with that of Lenin and any other practical manifestation of that doctrine, wherever it has been tried, in setting in place a totalitarian form of government, totally stifling the autonomy of civil society and freedom of the individual. Finally, he differed from both Lenin and Marx, who viewed an inevitable communist revolution as a once-off event. For Mao, a revolution is an ongoing, never-ending process - the revolution has to continually renew itself. This belief laid the basis for the series of socio-political convulsions that characterised China during Mao's long rule, from 1949 to 1976. The most forceful of these was his 'Great Leap Forward' (1957-1964) and the Cultural Revolution (1966-1976). These convulsions and their attendant changes, such as the forced collectivisation of agriculture, brought famine and untold suffering and even death for millions.

From its inception, the PRC turned against ties with the Western world and became very isolationistic and inward-looking. While in the beginning, there were ties with its neighbour and

ideological ally, the communistic Soviet Union, in the course of time these became increasingly strained, to the point that there was armed conflict (owing to a border dispute) between the two countries in 1969. Likewise, relations with its other powerful neighbour, India, was strained from the beginning owing to a border dispute, which culminated in the Sino-Indian War of 1962. In his seminal book explaining to Westerners how to understand the politics of China, former American Secretary of State Henry Kissinger (2011) explained the key to understanding 20th-century China as a hankering back to the isolationist policy of the Ming dynasty and an attempt to ensure that the encroaching Western colonisation of the past few centuries and the humiliation that was brought to Chinese pride and the devastating effect thereof to social capital would be kept at bay, never to return.

■ Economy

The socio-political convulsions of the Mao Zedong era had a devastating effect on the economy and the lives (including, but by no means limited to, the economic well-being) of the populace, as was noted above. After a short interregnum following Mao Zedong's death, Deng Xiaoping took over as the ruler in 1978 and initiated a policy of opening up the economy to the forces of the free market. What has followed is an economic miracle, as China has not only recorded double-digit growth percentages in many a year since 1979 but also has surged to become the second largest economy in the world, even fast catching up to become the leading global economy, at least in terms of the gross national product. The figures in Table 9.1 illustrate these statements.

The current president, Xi Jinping, has launched an ambitious 'Belt and Road Initiative'. The Belt and Road Project is a powerful outward projection to take up the vacuum in the global economic and political landscape that started in 2008 with the economic crisis that led to a tapering off of the US-led globalisation (Steyn et al. 2018). In terms of this policy, China has concluded, since 2008, 101 agreements with 86 countries, including investments in

TABLE 9.1: Economic performance of China in the world.

Indicator country	Gross national product per year (\$ billion)	Per capita gross national product per year (\$)	Annual per capita gross national growth rate (2014-2015) (percentage)
China	10338.1	7900	6.4
South Africa	3342.2	6080	-0.3
The United States of America	17 994	55 980	1.8
World	77 521	10 552	1.55

Source: World Bank (2018).

the 24 countries along the Belt and Road regions amounting to \$50bn (Jia 2018:A4). While the West is apprehensive about this project and attributes its successes to China’s ‘authoritarian’ and ‘predatory’ stance and sees it as not upholding ‘freedom, democracy and individual rights’ – all core values of the West – it should be stated that this policy of China stands on three Chinese principles, namely, mutual consultation, joint construction and shared benefits (Jia 2018:A4).

China’s rampant economic growth, in the absence of a moral framework of human rights (including environmental caring) and, related to that, of sustainable development, is visible in concern-raising levels of pollution and environmental degradation in general. The Yangtze River in China alone is responsible for 55% of the 2.75 million tons of plastic carried into the sea by rivers around the world annually (Sharpe 2019:164).

■ Social system

While the spectacular economic growth of China in recent decades could lift the population to, on an aggregate level, upper-middle-income status, as the figures in Table 9.1 testify, and while poverty levels are low, inequalities are rife. Less than 2% of the population survive on less than \$1.90 per day (the international poverty datum line), and 11.1% on less than \$3.10

per day (World Bank 2018). The most common measure used for assessing inequality is the Gini index. The value of this index ranges from zero (absolutely egalitarian society) to 100 (theoretically, the most stratified society). Lesotho and South Africa have, respectively, the first and second highest in the world, at 63.2 (Lesotho) and 62.5 (South Africa) (Central Intelligence Agency 2019). China occupies a still relatively high position of the 29th place, with a Gini index of 46.5, which is higher than the USA, being in the 39th place with a Gini index of 45.0, and far above egalitarian countries such as Sweden, which has a Gini index of 24.9 (Central Intelligence Agency 2019).

The PRC is politically a unified country, with multi-nationalities. Besides the Han ethnic group (into which 90% of the population could be fitted), a multitude of other nationalities are found. These minorities are concentrated on the peripheral provinces (or autonomous regions, as many of them are officially designated), and while they constitute only 10% of the population, their absolute numbers run into millions. The Constitution of China acknowledges 55 ethnic minority groups. These include the Zhuang (16.9 million), the Manchu (10.3 million), the Uyghur (10.1 million), the Yi (8.7 million), the Tibetans (6.2 million), the Mongolians (5.9 million) and the Koreans (1.8 million). While the accommodation of cultural and linguistic diversity in education in China is not at all beyond criticism (the discussion of this is beyond the aim and scope of this chapter, but as an example, Cantonese, with some 60 million speakers, is not recognised as a language), there are many praiseworthy aspects of the accommodation of ethnic minorities in education in China (cf. Yang & Wu 2010), including policies of trilingualism in education (cf. eds. Feng & Adamson 2010).

■ Religion and life philosophy

Three sets of religious and life-philosophical forces are predominant in China today, namely, the traditional, the communist and the global 21st-century philosophical strands.

The traditional religious and philosophical bases of Chinese culture are Confucianism and Daoism (McDermott 2011:57). The philosopher Confucius (551 BC – 479 BC) wrote six books: the *Books of Changes (The Analects)*, *Poetry*, *History*, *Rituals*, *Music and Spring* and *Autumn Annals*. Confucius was primarily a moralist, dealing in his philosophy with ethics. The central thesis of his ethics was the idea of *jen* or ‘benevolence’, and ‘righteousness’, a term describing efforts for the good of others. Confucius also preached the idea of single-minded devotion to *te* or ‘virtue’, although this may imply poverty, suffering and even death. In contrast to (Grecian or Platonic-Aristotelian) Western philosophy (including epistemology and ethics), orientated towards the abstract, universally valid, object principles, Confucian philosophy rather privileges interpersonal relationships. Expanding on his concept of filial piety, Confucius highlighted five relationships:

1. between sons and fathers
2. between brothers
3. between friends
4. between husbands and wives
5. between rulers and subjects.

Daoism stemmed from the teachings of Lao Zi (alternatively spelt as ‘Lao Tzu’), also from the 6th century BC. A distinction should be made between two kinds of (totally different, though not disconnected) Daoism, namely, religious Daoism and philosophical Daoism. Religious Daoism professes a belief in gods with saving power, sinful human nature and redemption from guilt and sin by means of prayer, penance, alchemy and other rituals of personal religion (McDermott 2011:66). The main tenets of philosophical Daoism are naturalness and not overdoing, as well as contentment and humility. Lao also believed that virtue stems from union and not from calculation. That means instead of exerting muscular effort, one should try to float with the stream and let the stream carry one.

That traditional Chinese philosophy still exerts a powerful force on education in China, including how learners and students

in China learn, in epistemology and how teachers teach, is unequivocally clear from publications such as those of Hayhoe and Li (2017), Nisbett (2003) and Watkins and Biggs (1996).

The communist doctrine, and the Maoist version in particular (Mao is still revered in Chinese culture, and China is still ruled by the Communist Party), has left its mark on the Chinese view of life and of the world. Finally, in spite of the dismissive attitude of the Chinese government towards the Doctrine of Human Rights and its not opening up its economy and country to foreigners commensurately to its push outward in terms of the Belt and Road drive, not only the belief in the merits of a free-market economy but also the place it gives English in its education system, the internationalisation of universities and the role of the social and electronic media (the attempts to control and of censorship by government despite) surely must mean that 21st-century life- and world-philosophical trends, such as individualism, global citizenship, consumerism and materialism, have seeped into the Chinese mindset.

Subsequently, the evolution of the education objective in China in the following successive periods in its history will be the subject of focus:

- traditional Chinese society
- China under Western influence
- period of Marxism and of the Sovietisation of education
- post-1979 modernisation.

■ Educational aims

■ Traditional educational aims

Education is highly valued in traditional Chinese culture. The first formal schools were established during the reign of Shun (2233 BC - 2148 BC), one of the five emperors. Schools were elitist institutions where specialised government employees taught the sons of the nobles. The content revolved around the

relationship and ethical aspects. The Five Teachings that were taught comprised the ethics of the family with consanguinity, *inter alia*, righteousness of the father, kindness of the mother, friendliness of the older brother towards younger brothers, respect of the younger brothers towards the older brother and filial respect of sons towards the parents (Mingyuan 2014:90). These tenets are similar to the teachings of Confucius, even though they precede Confucius by almost two millennia.

In Confucius's *Analects*, the purpose of education is explained as obtaining truth and becoming knowledgeable, thereby developing the mind and cultivating oneself so that a person could govern the country and manage the world. Thus, the *Analects* correlate the education of the individual to the fortune of the nation. Confucian scholars furthermore advocated the political concept of 'exercising governance with ethics' and stressed the roles of ethics and ethical education in administering the nation and providing a sense of security among the people.

The system of rigorous state examinations for selecting civil servants was established during the San (AD 581 – AD 618) and Tong (AD 678 – AD 907) dynasties. While this system was creating opportunities for upward social mobility for commoners, it entrenched the absolutisation of the ethical as the primacy of education, the authoritarian nature of education and the overemphasis of socialisation as educational objectives. As such, it has had an incalculable impact on Chinese education (Mingyuan 2014:103).

The objectives of education are to pursue the elevated principles, to exterminate human desires and to prepare sages for the highest ethical stage and the highest ideal of life, which means to produce people of unmatched brilliance, virtues and ability, sages who enjoy the highest prestige among gentlemen within the Chinese society. What was not accorded attention include individuality, cultivation of creativity, independent thinking, critical thinking, and scientific and technical education.

■ China sucked into the vortex of approaching European or Western hegemony

For over 2000 years, Chinese culture and education has evolved unhindered and with a remarkable degree of consistency, since the last Ming and early Qing dynasties. The infiltration of Western culture was not voluntarily – in fact, it was coerced and painful; it bred cultural conflict in China and was fiercely resisted, especially by the elite (rulers and aristocracy). For example, Chinese society's self-image of China being the centre of the world was shattered. Explorers from Portugal began to arrive in the late 15th century and, hot on their heels, missionaries, traders, and eventually agents of imperial conquests. China came into contact with Western science and technology, religion and cultural objects (such as clothes) and the Western outlook on life and the world. Missionary schools were founded by missionaries.

Superior Western weaponry, followed by the Opium Wars, was a wake-up call for China's rulers, and the Qing government established the School of Combined Learning (in Chinese *tongwen guan*) in 1862 – the first Western-type school in China. This school was followed by 21 other schools that all adopted the modern Western educational system. The first attempt to create a national education system of modern schools was the 1902 School Regulations (the Ren-Yin-Kui-Mao schooling system), which replaced the civil service examination system. This system copied the Japanese model (Lu & Hayhoe 2004:300), which was created after 1868, by an amalgamation of the American, French, German and English models.

At least three categories of Western-orientated or Western-modelled schools were established. These are, firstly, foreign language schools for training translators, for example, the Peking School of Combined Learning, the Shanghai School of Combined Learning, the Guangdong School of Combined Learning and the

Sinkiang Russian School. Secondly, military schools for the training of military officers rose up, such as the Tianjin Navy School, the Tianjin Armament School and the Hubei Armament School. Lastly, schools of technology were established for the training of technicians, such as the Fuchow Shipping School and the Shanghai Cable School. The aim of these schools was to provide Western-type education of a practical-technical bend to enable the feudal rulers of the Qing dynasty to hold their ground; so this was, as Mingyuan (2014:147) put it, not true modern education in essence. Sending Chinese students to study overseas was another important part of the Westernisation of education in China. This while the primacy of the ethic was broken with the advent of Western influence, education was still to socialise the educand into buttressing the existing society and government, uncritically submitting to the existing powers.

■ Marxist, Sovietised education

After China had become a republic in 1912, the May Fourth New Culture Movement in 1919, which shook traditional Chinese culture to its foundations, also brought onto the stage a new set of ideas on education. The October 1917 Revolution spurred the May Fourth Movement in China from 1919 onwards and brought Chinese history into the Marxism fold, where it would remain for the next 80 years. Marxism became popular, gained a foothold and flourished in China. Prolific writers such as Li Dazhao, Chen Duxiu (the author of *The Politics of Today's Education*), Yang Xianjian (the author of *Emerging General Education Theory of Soviet Education, History of Education ABC* and *The New Education Outline*) and Qian Jishi gained a readership, in spite attempts by the nationalist government to suppress and ban such literature. For the first time, education was brought into relation with economic processes. Education was to criticise the present bourgeois, feudal society and prepare the minds of people for a socialist revolution. Education should be for the masses, and not for the elite or a select few only.

As the Red Army of Mao Zedong started to gain the upper hand in more and more parts of the country, these ideas were implemented. This education assumed the purpose of training a leadership cadre for the Communist Party, for the army and for the government. A 5-year compulsory education (the Lenin Schools) was introduced, three years of primary school and two years of junior secondary, with the Soviet Polytechnical Model, whereby children spent part of the school day or school week working on farms or in factories.

Education was, as in the USSR, highly centralised, leaving very little room for either decentralised or local structures, or for the autonomy of civil society to come to its right, or for learners', teachers' or parental freedom and choice. As in the USSR, education was geared to provide trained human resources for a centrally planned economy.

■ Post-1979 modernisation

In the wake of the socio-political and economic changes that commenced in 1979 with Deng Xiaoping taking over as leader, education too underwent a major overhaul. It should be remembered that these changes took place in the context of two major economic changes, namely, the change from a centrally planned economy to a free-market economy and, secondly, a change from labour-intensive to knowledge-intensive economic activities.

On 18 March 1978, Deng Xiaoping delivered a decisive address. China would, as from then, pursue the four modernisations: modernisation of agriculture, modernisation of industry, modernisation of national defence and modernisation of science and technology. The aim of the modernisation drive would be to build a strong socialist society. Pivotal importance was attached to education as the basis of this modernisation drive. This new philosophy or policy gave rise to a vigorous public discussion on education among the intellectual and well-educated layers of the

Chinese population. Many articles on the subject appeared in China. Education was now to serve the purpose of economic development, albeit still towards a final goal of building a strong socialist society that would be able to maintain its ground in the contemporary world.

One tenet of the post-1979 rethinking of education was an opening up to the influences from the world beyond China. Funds were allocated for purchasing large consignments of textbooks from Western countries. Comparative education as a field of scholarship received a powerful boost (cf. Manzon 2013:239) and scholars (in the field of comparative and international education as well as other fields of education research) from abroad were brought to China as guest professors.

From 15 to 20 May 1985, the Central Committee of Chinese Communist Party (CCCCP) and the State Council organised the First National Work Conference on Education. At this conference, a set of reforms was drafted, which included the policy of 9-year compulsory education. Within the ensuing 15 years, the Chinese government was largely successful in rolling out this 9-year compulsory education throughout China.

Quality of education also became a topic of attention. The problem was that quality of education is no simple concept with a universally accepted meaning (cf. Wolhuter & Van der Walt 2018). The official and public discourse on education in China, however, revolved around methods of education and product quality (product quality referring to the effect of education on the total life of the educand, i.e., work-related skills, sense of values, character, social life, citizenship, etc.). For the Third National Conference on Education, held on 12 June 1999, the CCCCCP drew up a document with the title, 'Decision on intensifying educational reform and promoting quality education in an all-around way', which spoke about promoting quality education in an all-around way, in service of the communist cause.

This quest for quality education ran into a number of problems. The first was inadequate resources. The next was the too important place the examination had in the system (cf. Mingyuan 2014:232–233), meaning learners studying to gain good grades in examinations rather than striving towards personal growth by means of education. Mingyuan (2014:234–235) also argued that the need to introduce student-orientated education is a requirement before education quality could be enhanced. Education in China needs to change so as to allow every individual learner to develop or cultivate or fully develop his or her own particular aptitudes, talents and potential. Education should be future-orientated and open to innovation. Education should capitalise technology and the possibilities opened up by modern technology for education. Modern technology means that the role of the teacher as the transmitter of knowledge is outdated. In contemporary society and the new economy, the learner should rather be guided as to how to collect and process information and how to construct knowledge for him- or herself; that is, the new role of the teacher – different from the historical role in the teacher-dominant education system where the role of the authority-laden teacher is the transmitter of unchallenged knowledge.

■ Conclusion

In line with the aims of comparative and international education scholarship, a survey and assessment of the educational aims in China should prompt the South African student to contemplate and to probe the (present and possible future) South African educational aims. To use the taxonomy of educational aims explained in Chapter 2 of this volume as an analytical framework, the traditional Chinese education orientated to socialisation as the prime goal was strengthened during the first 80 years of the 20th century, when it suited the then extremely totalitarian government.

However, such a lopsided conceptualisation of objectives in education, to the exclusion of especially gearing education towards the realisation of individual capabilities, appears to be increasingly at odds with the exigencies of the 21st century. These trends include individualisation, individual empowerment and the rise of the autonomy of civil society. Moreover, while China may have registered impressive growth rates in successive years, ever since embracing policies of the free market, benefitting from technologies and expertise developed outside of China, thus catching up and avoiding pitfalls or mistakes made by trailblazers, if China wants to proceed to the orbit of a knowledge economy, it will find itself being constrained by an anachronistic education system.

The following demonstrates the stifling effect of the education system of China on innovation. Mingyuan (2014:242) argued that education reform and renewal in China should be guided by cutting-edge research on education. The dilemma is, as Mingyuan (2014:233) pointed out, that education quality at higher levels in China is exponentially handicapped by poorly prepared input from lower levels. Thus, in spite of impressive efforts to develop world-class universities, such as Project 985 and Project 212, and in spite of having in terms of student numbers since 2009 to 2010 the largest higher education system in the world, and since 2016 producing more doctorates than the USA (in 2016, China produced 71 000 doctorates compared to 48 000 by the USA), a commensurate research cadre has just never developed at Chinese universities. China contributed but a paltry 2.46% of the total author pool of all articles published in all Web of Science-indexed education journals in 2012 (Wolhuter 2017a:986). The corresponding values for the USA and the United Kingdom are 35.72% and 10.34%, respectively (Wolhuter 2017a:986).

Here perhaps lies the biggest lesson for South Africa in the experience of China. The experience of China cautions against forcing every learner and student into a straightjacket of an education system, against the stifling of institutional and local

autonomy, against the suppression of the autonomy of civil society, against policies and practices of pulling down everyone to the lowest common denominator (without for one moment denying the importance of equity, social justice and ensuring fair access to education) – all traits detectable in education developments in South Africa. In crafting world-class education systems capable of equipping their nations to hold their own in an exciting but competitively globalised world, South Africa and China alike should give positive recognition to the pursuit of excellence drawing on individual talent and aptitudes and allowing space for individual freedom and autonomy.

The aims of the South African education system and the educational objectives of the BRICS organisation: Are they informing each other?

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■ Introduction

The analysis of its aims enables the initial understanding of any education system or education project. Therefore, in order to understand that education system or education project, one should start at understanding its aims within the context of their inter-relationship with the internal and external functioning of that education system or education project. In studying the aims of the education system or an education project, the direction and functioning of that phenomenon become more distinct. It is also logical to start at analysing the guiding aims when possible collaboration amongst different organisations is considered. The level to which different education organisations could collaborate for one another's advantage will be, as a first step, clear from the way in which their aims are informing one another and are relating to one another. Therefore, the initial understanding of the level to which the BRICS organisation and South Africa, as a member state, can cooperate in the field of education, will be supported by the analysis of the level at which the BRICS educational objectives and the aims of the South African education system inform and relate to each other. A comparison of these educational aims and objectives is the correct starting point to understand the level to which the two sets of educational aims are informing each other.

This chapter can be considered as a first step in the process of understanding the level to which the educational objectives of

the BRICS organisation and the aims of the South African education system are informing each other. The aim of this chapter is to determine whether the educational objectives of BRICS organisation and the aims of South African education system support each other to the extent of succeeding in providing the educational needs of its constituencies. The comparative method of research is used, through which firstly the context of comparison is explained, after which the aims of the BRICS organisation and the South African education system are analysed to identify similarities and differences. The final step involves identifying relevant lessons to be learnt as well as formulating pointers towards more useful cooperation between BRICS and its member states in the field of education.

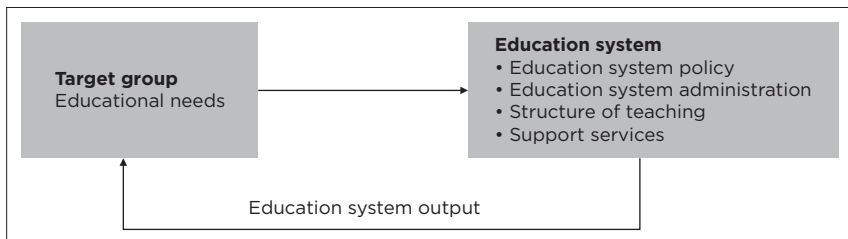
■ The context

In order to meet international standards, it is important for South Africa to consider global developments related to its educational aims and, particularly, to explore the level to which the aims of the South African education system and the educational objectives of BRICS organisation inform each other. To understand the relationship between the two sets of aims, it is firstly necessary to have a clear understanding of the relevant underlying concepts, namely the nature of the aims of international organisations, the functioning of education systems and the requirements of valid educational aims.

International cooperation is described as the interaction amongst individuals or groups from different countries to realise a common destination (Paulo 2014). Various such international organisations exist, such as the International Cooperative Alliance (COOP 2015), which strives to improve, for example, sustainable economic growth and food security, and the OECD (2015), consisting of 34 member states and focusing on the economic development of international trade. Some international organisations, such as the UNESCO, a specialised agency of the UN, are established to focus on the provision of education, with

the purpose to develop education in such a manner that it could be used to promote respect for justice, and the supremacy of law and human rights (UNESCO 2015b). Particular theories regarding international cooperation are developed to support the successful functioning of these international organisations (De Beer 2017).

To ensure the most effective introduction of education to provide in the educational needs of the target group of the education system or international institution, the correct definition of education should be used and the intervention should not imply a type of indoctrination. In this sense, education should be defined as the planned activities by qualified teachers to support learners to acquire the agreed-upon competencies in order to prepare themselves to fulfil their different roles in life (Steyn et al. 2017). In this context, a distinction could also be made between formal education, that is education provided in the formal structures and qualifications of the national education system, and non-formal education, which falls outside the ambit of a national education system. The national education system could be defined as the structure that has been established to provide the educational needs of the target group. The education system has been constructed according to different components, and each component consists of different elements. The basic structure of an education system is depicted in Figure 10.1.

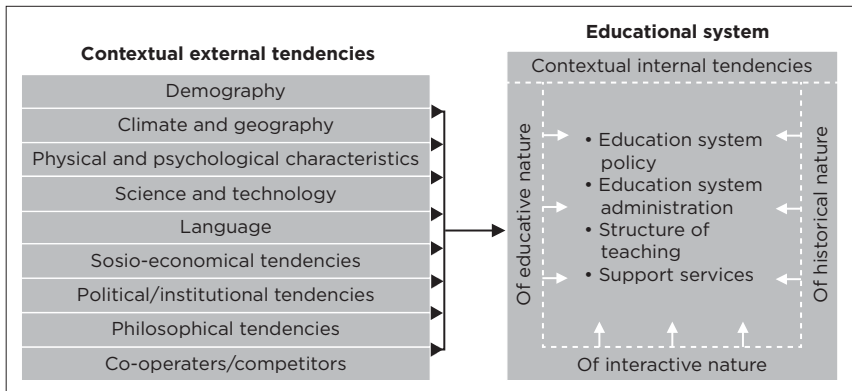


Source: Steyn and Wolhuter (2014).

FIGURE 10.1: The basic structure of an education system.

The aims of an education system are included as one of the elements of the component *education system policy*. These elements are the vision, mission, aims, objectives and policy formats through which policy is provided. The aims of an education system should always be understood within the context of other elements of component *education system policy*, and especially within the context of the vision of a particular education system. The aims of an education system should also be understood within the context of external and internal contextual tendencies of that education, which could be explained according to the representation thereof in Figure 10.2.

In order to be effective, aims, and in this case, specifically the aims that guide the provision of education, should comply with particular requirements. It should be kept in mind that the purpose of having aims and objectives is to plan the way forward which would help to identify vision of the future of an organisation (read ‘the future state of affairs’) and that it does not necessarily mean that if a particular organisation aims at something, it has a definite target that guides its functioning (Lounsborough 2018; Richardson 2004).



Source: Steyn and Wolhuter (2014).

FIGURE 10.2: External and internal tendencies that influence the structure (and aims) of a particular education system.

A clear difference exists amongst the concepts of ‘goals’, ‘aims’ and ‘objectives’ (Mills 2018). Usually, the basic function of goals of an education system is to agree on the responsibility of education system towards providing the educational needs of the target group in the long term, usually for more than 5 years. The goals, therefore, set the broad guidelines that should inform the preferred close relationship between the target group and the education system that should provide its educational needs. Therefore, the goals will be in close relation with the expectations and needs of the target group and set the scene to deliver attainable, sustainable and affordable education. Goals often refer to what is usually called the ‘mission’ of an organisation and can be regarded as a golden thread that guides all the activities of a particular organisation, such as an education system or an organisation for international cooperation.

Within the context of this chapter, the aims of an organisation or education system can be defined as the general but clearly formulated statements that identify the manner in which the target (read ‘end results’) of a project or an organisation could be reached in the medium term, that is 3 to 5 years. Ideally, the aims of an education system or any education organisation should express the direction given to the education system or organisation as a whole and to its individual components by the functionaries of the education system. The aims should thus reformulate the goals at a greater level of operational specification and should include an action verb. The circumference of the aims of an education system could be explained according to the following categories (Steyn et al. 2017:4):

- The cultural aim, according to which the education system should provide the target group with ample opportunities to preserve and develop the valued elements of their existing culture.
- The selecting aim, by providing differentiated education to enable individual learners to develop their unique potential according to their individual interests, aptitudes and abilities and in accordance with the needs of the country, thus ensuring their employability in a particular occupation.

- The aim to support learners to prepare themselves to become responsible citizens, which implies that the individual learners should acquire relevant values and competencies to contribute to the welfare and stability of the country, for example by obtaining a satisfactory occupation and not undermining the existing state organisation in an unlawful manner.
- The aim to provide learners with suitable opportunities to prepare themselves for spending leisure time meaningfully, such as by acquiring competencies in nature conservation or participation in the arts.
- Successful settlement of learners in the community as an aim of education implies that learners should have equal opportunities to equip themselves with required competencies to cope with an ever-changing national and international society.

Objectives are more specific targets that are developed to achieve particular aims. Aims relate to the end results, namely the 'what' that should be achieved, while objectives are required to achieve these results. Thus, the objectives, indicating the 'why', 'what', 'where', 'when' and 'how', determine the actions needed to achieve the aims and goals of an organisation (Steyn & Wolhuter 2014).

■ BRICS as an organisation for international cooperation

The term 'BRICS' is an acronym used for a relatively new but major international economic force consisting of world's five leading emerging economies, namely, Brazil, Russia, India, China and South Africa. Until 2009, 'BRIC' was the acronym for the combined organisation for cooperation amongst Brazil, Russia, India and China. Since the entry of South Africa into the group in 2010, 'BRICS' has been used as acronym to identify this international organisation of significant influence, especially in the developing world. BRICS nations, still part of the G20

grouping of countries, were considered to be the fastest growing market economies of the world, resulting in a shift in global economic power away from the developed G7 economies. It is predicted that by 2050 India and China will become the dominant producers of goods and services in the world, while Brazil, Russia and South Africa will become authoritative suppliers of raw materials. Apart from being a new international economic stakeholder, BRICS also became a new and influential political-diplomatic entity.

The core business of BRICS is based on strengthening its two main pillars: firstly, the focus on the coordination of economies and political governance of member states, and secondly, promoting cooperation amongst its member states in areas such as finance, agriculture, trade and economy, science and technology, education, health, security, and corporate and academic dialogue (O'Neill 2001). In trying to illustrate the size of BRICS, it can be explained that BRICS represents 26% of the total world land area and 42% of the total world population and contributes 27% of the total GDP of the world (De Beer 2017). BRICS has also been recognised as a significant role-player in different sectors of the world. BRICS aims, *inter alia*, to become an influential player in relevant international economic and social sectors of importance to support sustainable development and the eradication of poverty, especially in the developing world, and to reduce the risks of international economies by supporting the important role of small and medium enterprises in economic development (BRICS 2013).

Within the context of nature and infrastructural capacity (e.g. the sheer size) of BRICS organisation, the basic aims of the organisation are (BRICS n.d.:4-5):

- to enhance market access
- to promote mutual trade and investment
- to enhance and diversify trade and investment

- to strengthen macroeconomic policy coordination
- to strive for inclusive economic growth
- to promote the exchange of information
- to ensure a better quality of growth based on advanced technologies and skills development
- to promote interaction and cooperation with non-BRICS countries and international organisations.

The BRICS Strategy (BRICS n.d.:5) is based on the following principles:

- respecting the sovereignty of its member states
- functioning within the boundaries of international law
- contributing to the development of respective national interests and priorities of member states
- sharing information and striving for consensus in decision-making
- respecting the rules and principles of multilateral trading systems, such as those of WTO
- recognising the multipolar nature of global economy
- exchanging best practices in business development
- working towards transparency in investment environment
- supporting sustainable social and economic development and protection of the environment
- developing mutually beneficial cooperation.

In summary, it is clear that BRICS, with its huge infrastructural capacity, is and should be recognised as an important role-player on the world stage. It is stated that BRICS will respect the sovereignty of its member states, will operate within international agreements and will focus on the social and economic development of its member states, other developing nations and the world at large. Thus, it is concluded that BRICS focuses on social and economic development everywhere, without imposing its preferences on anyone. Therefore, one could expect that BRICS should recognise education as an important instrument to reach these ideals.

■ **The educational objectives of BRICS as an organisation for international cooperation**

In analysing the focus of BRICS on sustained economic and social development and its recognition of the role of small and medium enterprises, it is obvious that the provision of quality education in its member states is the central concern of BRICS organisation. Therefore, the BRICS organisation has to consider the nature and core features of education systems of its member states. The aims of each of the education systems of the member states could be summarised as:

- In the case of Brazil (1961), education is regarded as an essential right of all; a responsibility of all interested groups; an instrument to ensure cooperation in the community and to provide ample opportunity for all its citizens to prepare themselves for successful involvement in the community and to qualify to successfully enter the labour force. It is recognised that national unity and international solidarity should be promoted and learners should have ample opportunities to prepare themselves to use scientific and technological resources to maintain and develop their cultural heritage and to oppose any unfair discrimination based on social class and race.
- The basic aims of the education system of Russian Federation (2012) include the right of education to all without any discrimination is guaranteed in Russian Federation; in education, the focus will be on the importance of ensuring respect for human life, good health, freedom of an individual, promotion of positive citizenship, a culture of respect for the law and the will to support nature conservation. Maintaining the unity of education in Russian Federation is regarded as important, as are the protection and development of ethno-culture, character and traditions of the people of Russian Federation. A favourable atmosphere will be created for aligning the Russian education system with the education

systems of other countries on an equal footing and to the mutual benefit of relevant education systems. Opportunities for lifelong education for citizens in accordance with their educational needs will be provided within the context of recognising the importance of prior learning. Finally, the autonomy of educational institutions will be promoted.

- The aims of the Indian education system are found in the Indian National Education Policy promulgated by the Government of India, Department of Education (1986). It focuses on education as an essential right and privilege of everyone, which should be respected as the foundation of total national development, which includes the material and spiritual development of the community. It is accentuated that education has an accumulative role because it contributes to the refinement of perceptions of sensitive issues that contribute to national cohesion and to the formation of a scientific attitude. It is accepted that education should promote the values of socialism, secularism and democracy that are entrenched in the Indian Constitution. It is emphasised that education should provide the citizens with sufficient opportunities to prepare themselves to engage successfully in the different levels of the economy, and through this to guarantee national self-reliance. Finally, it is accepted that education should always be valued as a unique investment in the present and the future of the country, which should always be at the heart of the National Education Policy of India.
- Regarding the aims of the education system of the PRC, one should recognise the fact that it employs the largest education system in the world. The education system includes, for example, about 394 200 primary schools, with 112.46 million learners in these schools (Yang 2008:429). In the 1995 Education Law of the PRC (1995), the aims of the Chinese education system are summarised as follows: Education should assist the community to maintain the philosophies of Marxism or Leninism and constructive socialism, as it is naturalised according to the Chinese characteristics, and

education should comply with the basic principles of the Chinese Constitution. It is accentuated that education will serve as a foundation for building socialist modernisation in the PRC, and thus the state will give priority to the development of educational enterprises. It is expected that the provision of education should meet the educational needs of society and support the development of morality and intelligence as well as the physical development of the learners and the promotion of patriotism, high ethical standards, positive discipline and ethnic unity. Through education, the citizens' right to education and training should be guaranteed and they should enjoy equal educational opportunities, regardless of nationality, race, gender, occupation, property or religious beliefs. Finally, the Chinese language, both oral and written, will be the basic teaching and learning language in schools and other educational institutions, but it is accepted that students from minority nationalities can use their home languages.

- The aims of the South African education system (Republic of South Africa 1996:art. 4) are based on human rights, as recognised in the South African Constitution, and should be understood as stipulated in the vision of the South African education system, through which it is envisaged that education should contribute to a South Africa in which all people will have access to lifelong education and training in order to improve the social and economic well-being of South Africa. By recognising the basic human rights, the implication is that all citizens should have the opportunity of a lifelong quality education in order to establish a democratic, free, equal, just and peaceful society in South Africa, while respecting and developing its diverse religious, cultural and language traditions. Another important aim is that school communities should accept ownership for their schools through the functioning of legitimate representative governance bodies and create a culture of accountability in the education system.

In analysing the summary of the aims of education systems of various member states, the following is clear:

- Each education system functions according to a basic set of values which coincides with the basic convictions of the community.
- The role of education in the lifelong equal development of all individuals takes the centre stage.
- Quality education, according to the real educational needs of the society in its relationship with commerce and industry, should be the central guiding line.

The educational objectives of BRICS organisation should be understood in the context of its general aims and principles (vide para. 3) and the educational aims of education systems of BRICS member states. The educational objectives of BRICS organisation include the following (BRICS 2013; 2015; De Beer 2017):

- It is emphasised that cooperation amongst the universities of BRICS member states, the building of partnerships and the exchange of competencies in education provisioning should be promoted. It is, in general, agreed that centres of teaching and research excellence should be established to support collaboration in research and publication. The establishment of a BRICS Network University should be prioritised and the qualifications in higher education should be mutually recognised amongst member states.
- The importance of establishing partnerships for the development of technical and vocational education and training is documented as an educational objective of priority for BRICS organisation. Skills development should be built on the best practices that are found in BRICS nations and should share ideas, methods and strategies of mutual interest.
- The transferability of education qualifications amongst BRICS nations should be improved. This aim also refers to the necessity of comparative education projects in order to set norms regarding the quality of education in different member states.

Introduction of lifelong learning and self-development as well as learning different languages by means of formal and non-formal education are recognised as important steps to be taken.

- It is accentuated that member states should collaboratively invest in quality education in order to support economic and social development, for example by supporting the acceleration of UNESCO's (2015a) project of EFA. Member states are requested to share statistical data regarding education indicators and national assessment systems.

Because BRICS is an organisation of international cooperation, its educational objectives logically focus on a few areas to ensure that education in member states will support the general aims of BRICS. Therefore, the educational objectives of BRICS focus on:

- General education should be developed in such a manner that the citizens of member states will acquire the required competencies to support the economic and social aims of BRICS.
- Relevant statistical data should be shared, and norms should be developed to mutually recognise the qualifications of institutions.
- Particular focus should be placed on sharing best practices regarding vocational and technical education in order to assist learners to acquire the competencies that are required in the world commerce and industry and for employment.
- The importance of and collaboration in higher education are emphasised because this level of education is of particular importance for economic and social development in member states.

■ Aims of the South African education system

Effective national education systems succeed in providing the primary responsibility of education systems, that is providing the educational needs of national society as its target group (Steyn et al. 2017). Therefore, the goals, aims and objectives of any

education system should be directed to organise its education system regarding its components and elements in such a manner that the education system is in the best position to provide quality education in an attainable, sustainable, affordable and productive manner to all the citizens of that country. In doing so, the particular external and internal contextual tendencies should be closely attended to (Steyn & Wolhuter 2014). In the case of this chapter, particular attention is given to the impact of BRICS, as an organisation of international cooperation, on the South African education system, with particular reference to their education aims.

In its endeavour to realise the general guidelines of education systems to provide educational needs of all its citizens and to realise everyone's right to basic and further education (Republic of South Africa 1996), the aims of the South African education system should be understood within the ambit of its vision, which states the following (Department of Education 1995):

It is the joint responsibility of all South Africans who have an interest in the education and training system to help build a just, equitable, and high-quality education system for all the citizens, with a common culture of disciplined commitment to learning and teaching. (s. 3[13])

In analysing the vision of South African education system, it is clear that it correlates with the definition of a national education system, according to which the education system should deliver such education services that provide real and diversified educational needs of all the inhabitants of South Africa. In this vision, all South Africans are called upon to take responsibility in their own spheres to enable the education system to provide quality education. Everyone with an interest in education, be it parents or members of the broader family or members of societal groups or individuals and organisations in commerce and industry, has the responsibility to act in favour of quality education in his or her circle of influence by either supporting individual learners to achieve according to their own abilities, interests and aptitudes or contributing to the welfare of South Africa. It is also envisioned that the provision of education should be reasonable, that is fair to everyone and without undue discrimination;

equitable, that is provided in a justifiable and reasonable manner; and of high quality, as determined by the level to which education fulfils the real educational needs of the country. At the same time, the quality of education should be equated with the levels of education quality in other comparable countries. In this case, the members of BRICS will obviously use an important external measure to determine the quality of South African education. Quality is also determined by means of the level to which qualifications that are acquired by learners in South Africa are recognised and accepted in foreign countries. It is also important to note that the vision incorporates the notion of developing a common culture of disciplined commitment to learning and teaching. These inclusions point to the focus on the acceptance of the responsibility of all to work towards and not limit the options of any learner to maximally achieve in academic project. Also, learners, educators, education authorities and administration should do everything in their power to realise, on the one hand, successful teaching and, on the other, successful learning.

Within the context of its vision, the aims of the South African education system can be summarised as follows (Republic of South Africa 1996:art. 4):

- Education and training are accepted as basic human right, which implies that all citizens should have the opportunity of access to education in order to develop their own unique potentialities in such a manner that they are able to contribute their civic responsibility to the development of society. Through education, learners should learn to accept and support the common democratic values and the importance of due process. It also implies that human rights should be observed in educational institutions by educators as well as learners. It is accepted that mutual respect is intrinsically an essential part of human rights of both educators and learners, and it is expected that this will especially determine the establishment of positive employee and learner discipline. It also entails a guarantee of equal access to basic education and training and that educational policy should enable all

individuals to have access to lifelong education and training of good quality. The realisation of basic internationally accepted human rights in their education systems is accepted as of primary importance by BRICS member states. Because these human rights can and should be implemented according to local conditions, the detailed study of such instruments and practices to ensure the sustainable implementation of human rights amongst particular education systems may identify particular lessons to be learnt and the best practices to be applied in South African education system as well as in the education systems of other member states.

- Education and training should be directed towards the establishment of a democratic, free, equal, just and peaceful society in South Africa while respecting and developing diverse religious, cultural and language traditions. Focusing on the establishment of a healthy society in South Africa means that education should provide real educational needs of the society as a whole. This is recognised by the fact that all inhabitants have the opportunity of and right to safety, freedom, peace and equal treatment. However, at the same time, the right of diversity on the grounds of religion, culture and language is recognised. Imbedded in this recognition is one of the major political issues of South Africa, namely providing unique educational needs of a diverse population without discriminating against another part of the community. Unfortunately, some of these diversities could be linked to racial and language differences. These include culture diversities that refer to the cultures of black population and the culture of Afrikaners as part of white population groups, and language differences corresponding with the languages of black population, which is not used as the language of teaching and learning at the post-foundation phase of education, and Afrikaans, which is the home language of some of the brown and white population groups and is used as the language of teaching and learning up to the highest levels. In these cases, recognition of Afrikaans as the language of teaching and learning is often regarded as discrimination

against the black population and an attempt to prevent racial integration. As a result, attempts to recognise diversity are not fully implied or lead to racial hostility. In this case, the comparison to similar educational issues, as influenced by particular political issues, in BRICS member states could help to identify lessons to be learnt and options to be employed to manage such issues in South Africa.

- Parents and guardians have the primary responsibility for the education of their children and the right to choose the suitable form of education for their children. They also have the right to choose the language of teaching and learning as well as the cultural and religious basis of their children's education. The state should assist parents who are not able to make correct decisions regarding the education of their children. In this case, the challenging issue of diversity is again the internationally experienced focal point of the lack of willingness of majority to provide the (educational) needs of minority. The question is how this challenge is being managed in other BRICS nations and what lessons could be learnt.
- It is also envisaged that school communities must accept ownership of their schools and legitimate representative governance bodies should be instituted democratically. Democratic governance should be characterised by consultation with all relevant interest groups. This issue also immediately points to the problem regarding the relationship between central and local control in education and what type of responsibilities and powers should be allocated particularly to local authorities, including who should be included in local education authorities, that is only parents or the local societal governing structures as well. Another challenge in the education systems of BRICS member states is that in their target groups, some parents and societal structures are not able to understand the unique challenges of their education system. Combined and comparative research will contribute to the understanding of these challenges and how these developing sectors of target groups could be empowered to substantially contribute to the provision of quality education for their children.

- Quality education and training, recognising the importance of carefully planned and executed teaching that will result in successful learning, should be provided in an integrated manner according to the provisions of National Qualifications Framework (NQF). These efforts should have a culture of quality teaching and quality learning as well as a culture of quality management as their foundation. A culture of accountability should be created at all levels of education control. Directed research projects and inter-participation amongst member states will contribute to the important role organisations such as NQF play, and how the culture of, inter alia, quality teaching and quality learning and accountability could be improved on organisational and motivational levels.
- Differentiated education according to the abilities, aptitudes and interests of individual learners should promote independent and critical thought and should support learners with required competencies to effectively and successfully participate in the economy and be involved in their own career development. It is stated that mathematics, science and technology education is crucial for the economic advancement of South Africa as well as individual learners, while other streams of education, such as arts and environmental education, should not be neglected to ensure a decent quality of life and maintain the sustainable use of natural resources. The support of individual learners to acquire such competencies to contribute to the development of economic situation of individual citizens and the country at large is particularly found, in one way or the other, in the aims of education systems of all member states of BRICS. However, these aims are reached on different levels of success by the education systems of different member states. Being the very basic responsibility of any education system, a careful analysis of the nature of successes and failures to adequately support economic welfare, sufficient levels of employment and the ability to ensure self-perseverance could be of enormous value in improving the success rate of individual education system.

- Lastly, it is expected that the principles of attainability, sustainability, efficiency and productivity should form the basis of all activities in the provision of education. It is accepted that the provision of education cannot proceed without recognising the realities and availability of required resources, such as teaching personnel, administrative structures, sufficient funding and applicable infrastructure. Thus, it is accepted that an education system could be effective only if education provides the real educational needs of target groups in an attainable and sustainable manner. Effectivity in education could be realised only if a reciprocal relationship exists between a particular education system and its target group. Furthermore, an education system could succeed materially and financially if it provides in the most affordable manner the educational needs of target groups. This implies that the education system increases its productivity, that is increases the gap between output (e.g. the number of learners achieving academically at an acceptable level) and the input (e.g. the cost of human and material resources). It is extremely important to put the issue of productivity in education at the centre of debate to ensure that the focus will be to increase the quality of education and decrease the accompanying cost thereof (Steyn 2017:1-2).

An integrated analysis of the aims of South African education system illuminates the following:

- A central guideline is the basic right of learners to have quality education that assists them to acquire required competencies in order to interact successfully in community as well as in economy and develop attainable and sustainable career options according to their unique potential.
- It is recognised that lifelong learning should be available by means of qualitative formal and non-formal education on different education levels, that is from pre-primary to tertiary, according to the integrated guidelines of NQF.
- The curriculum at different education levels should represent different fields of specialisation and in this manner support

learners to successfully use the available differentiated opportunities in formal, vocational and technical education.

- All relevant interested individuals and groups should work towards providing quality education, recognising a culture of quality teaching, learning and management as well as accountability within the sphere of attainability, sustainability, efficiency and productivity.

These aims are realised through different legislations and policy frameworks, such as the *National Education Policy Act* (27 of 1996), the *South African Schools Act* (84 of 1996), the *South African Qualification Authority Act* (58 of 1995) and the *Higher Education Act* (101 of 1997) (Republic of South Africa 1997).

Following are the aims of South African education system realised through the *National Education Policy Act* (27 of 1996):

- to determine national education policy by the minister according to agreed-upon principles for the provision of education
- to provide consultation guidelines with particular established bodies prior to the determination of policy
- to ensure that education policy is developed, published and implemented
- to establish effective instruments for the formative and summative assessment of education at all levels.

According to the *National Education Policy Act* (27 of 1996), policies should be implemented for the provision of quality information systems; control, management and organisation of national education system; provision of facilities, finances and development plans for education system; opportunities for innovation, research and development in education; educator-student ratio; professional education and accreditation of educators; organisation, control, financing, establishment and registration of education institutions; compulsory schooling; admission of learners; minimum numbers of hours of schooling per day, and total number of days per year of schooling; coordination of dates of schools terms; coordination of curricula,

core syllabi, standards, examinations and qualifications; language in education; control and discipline of students and pupils; provision of support services, for example medical, welfare and career and guidance services; cooperation with other state departments, provincial education departments, local authorities and non-government organisations regarding education policy; and international relations in the field of education. These foci of the Act, within the stipulations that opportunities for research and international cooperation should be strived for, immediately point towards issues to be explored amongst BRICS nations in order to identify possible lessons to be learnt that could be applied to increase productivity in the South African education system.

The objectives of the *South African Schools Act* (84 of 1996) is, *inter alia*, to provide guidelines for the organisation, governance and funding of schools, establish minimum and uniform norms and standards for the provision of education in schools and ensure the provision of quality education across the school system. Particular attention is paid to compulsory school attendance; admission to public schools; the language policy of public schools; freedom of conscience and religion in public schools; discipline of learners; establishment, maintenance and status of public schools and the powers, functions, duties and composition of their governing bodies; provision of education to learners with special educational needs; funding of public schools, school fees, school funds and financial records of public schools; and regulations for the establishment, registration and subsidisation of independent schools.

In the *South African Qualification Authority Act* (58 of 1995), the quality of education is put in focus by providing NQF and establishing the National Qualification Authority. In the *Education Labour Relations Act* (146 of 1993), labour issues in the education system are addressed to promote and maintain labour peace. The *Higher Education Act* (101 of 1997) (Republic of South Africa 1997) was enacted to regulate higher education, provide for the establishment of Council on Higher Education and provisions for the establishment and maintenance of institutions of higher education.

In considering the level to which the South African education system has realised its own aims, South Africa is in a unique and, at the same time, challenging position because characteristics of both 'developed' and 'developing' countries are present in the educational aims of the country. The literature also confirms that, in comparison to international standards, the South African education system is currently not successful in realising its own aims (Brink 2013; Mutasa & Paterson 2015; Rademeyer 2013). For example, it has been found that 43% of the Grade 5 learners in South Africa do not have the basic reading skills that are required at this level, and in the international study on 'Tendencies in International Mathematics and Science', South Africa achieved one of the three lowest assessment results out of 60 education systems (Mullis et al. 2012).

■ Comparison between the educational objectives of the BRICS organisation and the aims of the South African education system

The reason for this comparison could be found in the need to have a better understanding of involvement of BRICS in education to the advantage of its member countries. South Africa, as a member state, does in a sense represent Africa as a leading nation.

On the one hand, BRICS has published particular educational objectives that are directly focused on concrete issues that are important to promote the functioning of BRICS organisation, such as the promotion of cooperation, sharing of best practices and cooperation in the fields of vocational and higher education. On the other hand, the aims of South African education system can be summarised in a vision which states that it is the joint responsibility of all South Africans to help in building a fair education system of high quality for all citizens, characterised by a common culture of disciplined commitment to learning and teaching.

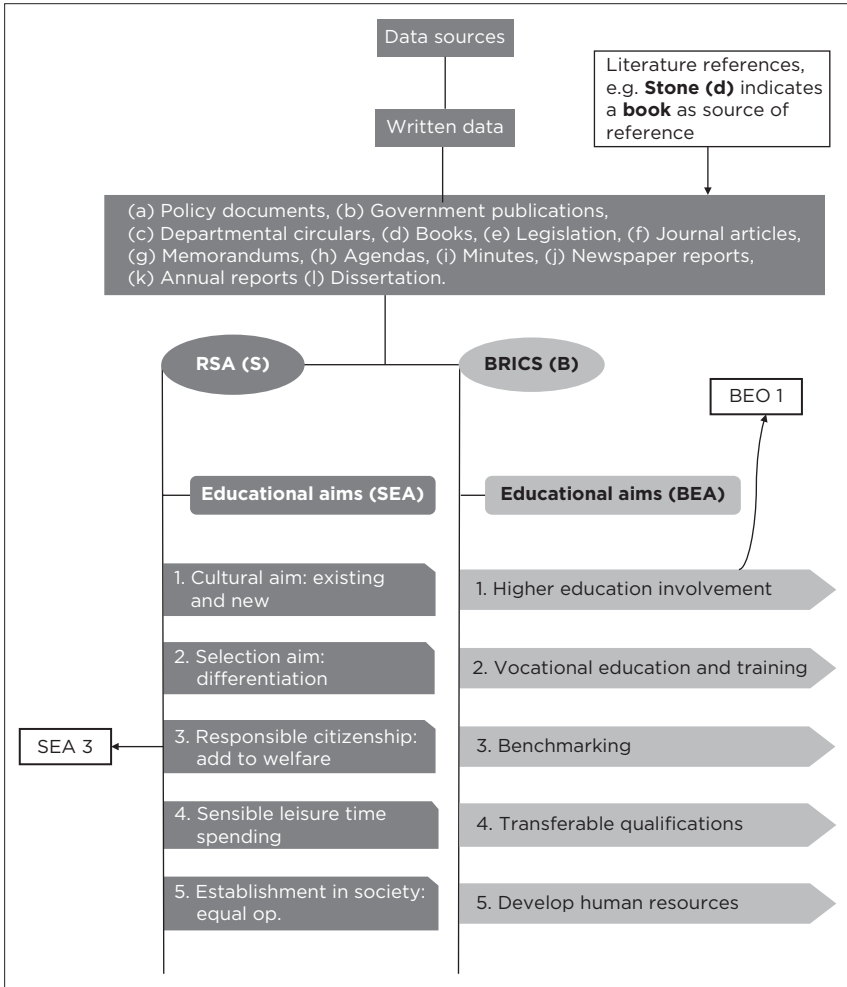
Sense-making is underscored as the primary goal of interpretive research in the understanding of social and interpersonal phenomena such as education. In this interpretative study, the explicit and implicit meanings of educational objectives of BRICS organisation and the aims of South African education system, in accordance with Given (2008), are disclosed, discovered, experienced, described in detail and compared. Therefore, the collection of relevant data required to compare the two sets of educational aims and objectives relied on a thorough documentary analysis by means of superficial investigation or 'skimming', thorough examination (read and re-read) or analysis, interpretation, verification and description of articles, letters, administrative documents, reports, unpublished and published documents, memoranda, agendas, government policy documents and legislations. The documents used had to comply with particular principles and criteria; so, it was essential that information-rich, relevant documents were chosen purposefully (Patton 2002). The selection criteria applied in this study were the educational aims of education systems as expressed in the relevant policy documents of South Africa and the participating BRICS countries. It is within this context that, through comparative documentary analysis, the similarities and differences between the educational aims of South Africa and the educational objectives of BRICS were explored and organised (cf. Given 2008; Maree 2008; Shuttleworth 2008).

Thorough analysis and interpretation of data involve the description and investigation (read 'comparison') of content and underlying themes in the data (Marshall & Rossman 2011). Content analysis is, according to De Beer (2017), the most appropriate method for analysing documents effectively. In this study, the content is analysed and interpreted by means of a continuous but non-linear process known as 'data analysis spiral', as proposed by Van der Vyver (2017:8). In this regard, data are subsequently demarcated, organised, examined, integrated, summarised, thematically analysed and observed, as proposed by Steyn (2008).

Comprehensive analysis largely depends on the researcher's understanding of the data. As soon as the data have been organised, the researchers can begin to gain an overview of the central phenomenon of the study by reading and re-reading the text (Nieuwenhuis 2007:104). According to Van der Vyver (2017), these activities refer to the identification of general categories, themes and/or possible sub-themes as well as the classification of data accordingly. De Beer (2017) believes that such identification cannot be effective without a thorough description of the aspects that have been compared. In order to organise data in accordance with the De Beer's advice, these were tapered to short statements or indicators that summarised the core characteristics or explicit or implicit meaning of relevant aims under review.

In order to support sense-making of relevant data, one of the most common techniques that is used to integrate, summarise and organise data in sensible and logical groups is coding (Seers 2012). Coding involves the allocation of short sections (codes) to longer pieces of data that highlight the essence and relationships that are noticeable in a particular set of data (Nieuwenhuis 2007). In order to analyse the research topic thematically, the coding used in this study is depicted in Figure 10.3. For example:

- Written literature references, for example 'Stone (d)' indicates a book authored by Stone (1981) as source of reference.
- Likewise, 'De Beer (l)' would refer to a dissertation by De Beer (2017).
- Letters 'S' and 'B' refer to South Africa and BRICS organisation, respectively.
- Abbreviation 'EA' refers to the concept of 'educational aims'.
- Abbreviation 'EO' refers to the concept of 'educational objectives'.
- Therefore, 'SEA' and 'BEO' refer to the South African educational aims and BRICS's education objectives, respectively.



Source: Engelbrecht (2018).

BEA, BRICS educational aims; BEO, BRICS's education objectives; RSA, Republic of South Africa; SEA, South African educational aims.

FIGURE 10.3: Coding of data.

- Codes 'SEA 3' and 'BEO 1' refer to the South African educational aims and BRICS's educational objectives, respectively, specifically regarding responsible citizenship and involvement in higher education (BRICS 2013, 2015; De Beer 2017; Steyn et al. 2017).

After the encoding of the data, the thematic analysis was organised by means of Table 10.1 based on seven themes, of which the origins can be attributed to the coding of written data sources (e.g. S:EA 3, B:EO 1 and supporting literature). The technique of juxtapositioning was used to execute the actual comparison of the aims. Juxtapositioning involves the action of

TABLE 10.1: Thematic analysis.

Theme no.	Themes	SEA	BEO	Literature
1.	Cultural education	1: Expanding cultural heritage and language traditions 3: Responsible citizens	5: Develop human resources	Kandel (1981) (d) Stone (1981): <i>'Bearing of a nation's character'</i> UNESCO (2011) (a): Inability to develop + transfer existing cultural content
2.	Career fulfilment	2: Preparation by ability and interest 2 and 5: Differentiated education 5: Equal education opportunities	2: Cooperation in connection with technical education and training 5: Develop human resources	Desai (2016) (j): Optimal development of individuals Erasmus et al. (2002) (f): Need workers to equip themselves with necessary skills and a higher level of education Dludla (2017) (j): Empower community Blignaut (f): Prepare for changing demands of society
3.	Higher education intervention	No EA was observed in this regard	1: Involvement in higher education	Department of Basic Education (2013) (c): Ongoing higher national and international expectations

Table 10.1 continues on the next page →

TABLE 10.1 (Continues...): Thematic analysis.

Theme no.	Themes	SEA	BEO	Literature
4.	Leisure time spending	4: Learning from meaningful leisure activities	5: Develop human resources	UNESCO (2011) (a): Failure to create opportunities for meaningful leisure activities
5.	Transferable qualifications	No EA was observed in this regard	3: Benchmarking 4: Amongst BRICS countries	Department of Basic Education (2013) (c): Emphasise the need to ensure international comparable South African qualifications
6.	Economic growth	3: Contribute to welfare of the country	5: Common economic growth	Desai (2016) (j): Effective member society
7.	Successful settlement of learners in the community	3. Responsible citizenship 5. Establishment in society: Equal opportunities	5. Develop human resources	Desai (2016) (j): Effective member society

Source: Engelbrecht (2018).

organising the data ‘adjacent to one another’, so that comparable data can be compared. Notable and subtle similarities and differences amongst relevant information were identified and recorded in order to observe the universal and specific relationships amongst the aims as relevant data (cf. Steyn 2008).

BEO, BRICS’s education objectives; EA, educational aim; RSA, Republic of South Africa; SEA, South African educational aims; UNESCO, United Nations Educational Scientific and Cultural Organisation.

In comparing the educational aims or objectives of two organisations, the nature of each should be thoroughly recognised. In the case of comparing the aims of an education system and the educational objectives of an organisation for social and economic development on national and international levels, it is

expected that the aims of the education system are much more diversified than the focused educational objectives of an international organisation such as BRICS. An overview of the results from thematic analysis indicates to a greater extent that the aims of the South African education system and the educational objectives of BRICS organisation are mutually inclusive of each other. The analysis indicates that all five essential South African educational aims are to some extent reflected in the educational objectives of BRICS organisation. However, the results of thematic analysis indicate two noticeable gaps in the aims of South African educational system compared with the educational objectives of BRICS. The above-mentioned observations are illustrated in the following summary.

The following themes of SEA and BEO show significant similarities:

- **Theme 1: Cultural education**

With regard to this theme, SEA 1 and 3 show the intention to expand particular valued elements of cultural heritage and language traditions and educate responsible citizens. BEO 5 links with the former SEA in this regard when prioritising human resource development. The BRICS organisation recognises diversity and supports the development of general education in such a manner that the citizens of member states will acquire required competencies to support the economic and social aims of BRICS. It is stated in the South African education system that through education learners should learn to accept and support the common democratic values that are directed towards the establishment of a democratic, free, equal, just and peaceful society in South Africa while respecting and developing diverse religious, cultural and language traditions (Republic of South Africa 1996:art. 4). In addition, as far as possible, parents have the right towards cultural and religious basis of their children's education (Republic of South Africa 1996:art. 4). The statement: 'It is important, therefore, as a means of appreciating and understanding the significance of a national system of

education, to consider the bearing of a nation's character upon its education' (Kandel 1981, cited in Stone 1981:n.p.) and a report by UNESCO (2015a), highlighting South Africa's inability to convey existing cultural contents, confirm the underlying similarities between SEA 1 and 3 and BEO 5.

- **Theme 2: Career fulfilment**

SEA 2 and 5 provide for an education system that focuses on providing selection opportunities for educational users to be prepared according to their aptitude, ability and interest regarding professional fulfilment. At the same time, these aims visualise differentiated education, which aims to enhance job satisfaction by means of learners' learning preferences, interests and strengths. SEA 5 refers to equal education opportunities that, as in the case of differentiated education, can influence potential job satisfaction. It is accepted in the South African education system that differentiated education should promote independent and critical thought, and support learners with the competencies required to participate effectively and successfully in the economy and be involved in their own career development. Mathematics, science and technology education are recognised as crucial for economic advancement, as it is promoted that lifelong learning should be available to all. Collaboration related to technical vocational education and training (BRICS Educational Aims [BEA] 2) guarantees the employment of young people who meet the changing demands of a broad society (Blignaut & Knoetze 1998). BEA 5 refers to the development of human resources, which, according to Desai (2016), ensure the optimal development of an individual to function effectively as a member of society. The BRICS organisation also supports the introduction of lifelong learning and self-development, by means of formal and non-formal education, in order to acquire different competencies required in the world of commerce and industry and for employment.

- **Theme 4: Preparation of learners to engage in leisure activities**

SEA 4 strives to guide learners to spend their leisure time meaningfully. The researchers associate leisure activities with BEA 5 and specifically with reference to human resources

development. A report by UNESCO (2015a) highlights the value of creating opportunities for creating meaningful leisure activities.

- **Theme 6: Economic growth**

This theme manifests itself in SEA 3 with the intention of training learners to contribute to nation's welfare. BEA 5 adheres to the quest for joint investment in education for common economic growth. Learners who are equipped with essential skills to function effectively as members of society will undoubtedly make a productive economic contribution when entering the labour force (Desai 2016).

- **Theme 7: Successful settlement of learners in the community**

Regarding the theme of successful settlement of learners in the community, particular similarities could be identified. It is accentuated in the South African education system that different foci on the provision of education should not be neglected in order to ensure a decent quality of life and maintain the sustainable use of natural resources (SEA 4 and 5). The principles of attainability, sustainability, efficiency and productivity should form the basis of all activities of South African education provision (SEA 3). By means of BEA 5, the educational objectives of BRICS organisation accentuate the importance of economic and social development amongst member states and also support cooperation in building partnerships and exchange of competencies in education amongst the universities of BRICS member states.

The following themes of SEA and BEA seem to differ, although only at face value:

- **Theme 3: Higher education intervention**

Improved involvement in the field of higher education is emphasised in BEA 1. Although the South African Department of Education (1995), with regard to socio-economic transformation, emphasises the need for new and creative approaches to keep pace with continued higher national and international expectations, no reference regarding this theme

has been found in the five essential educational aims within the South African context. However, the value of quality higher education and the comparison of HEIs in South Africa with international institutions of higher education are implicitly an essential part of the *Higher Education Act* (101 or 1997) (Republic of South Africa 1997) and its realisation in the circles of higher education in South Africa.

- **Theme 5: Transferability of qualifications**

The importance of promoting the transferability of educational qualifications amongst BRICS countries is particularly highlighted in BEA 4. In this regard, benchmarking (BEA: 3) is important to compare the performance and the best practices of education systems. Just as in theme 3 above, no clear reference to this theme has been found in SEA, although it is an essential part of education policy in South Africa. For example, in government notice 1383/2000 (15/12/2000), it was legislated that the 25 colleges of education should be incorporated into several universities and that their qualifications should be favourable compared with international standards regarding teacher education.

■ Main findings

The comparison of issues in education systems, that is the aims of education systems, is to understand the issues and identify lessons that could be implemented to improve the present situation. From the description of elements of comparison, particular similarities and differences between the aims of South African education system and the educational objectives of the BRICS organisation could be identified.

In this regard, the research confirms that both similarities and gaps exist between the respective educational aims and objectives. It is clear that there is sufficient evidence that all five essential South African educational aims are visualised, to a greater or lesser extent, in the educational objectives of the BRICS organisation (refer to Table 10.1: Thematic analysis – BEA).

An observable gap in the realisation of South African educational aims seems to be the absence of any form of written reference regarding improved involvement in higher education (BEA 1) and gap in the transferability of teaching qualifications amongst BRICS nations (BEA 4), although these aspects are clearly included in the sub-aims of the Act on Higher Education (101 of 1997) and policy statements of the National Department of Higher Education. The main gap between the South African educational aims and the educational objectives of the BRICS organisation seems to be the absence of any written reference in the South African educational aims to improve involvement in the field of higher education (B:EO1) and transferability of educational qualifications internationally (B:EO4), although these aspects are clearly included in the sub-aims of the Act on Higher Education (101 of 1997) and in policy statements of the National Department of Higher Education. These shortcomings suggest an opportunity to improve alignment between the aims of South African education system and the educational objectives of the BRICS organisation in order to strengthen education as a common interest within the BRICS organisation and enhance the effectiveness of South African education system by achieving the optimal development of human potential.

It is clear from this comparison that seamless linkages exist between the educational aims of South African education system and the educational objectives of the BRICS organisation and that each set of aims can and will positively support the successful realisation of respective educational aims. The respective sets of aims clearly inform each other. Through an in-depth analysis of the aims of South African education system, it has been concluded that particular aspects could be extrapolated, where thorough comparisons amongst member states and the educational objectives of BRICS organisation can and will lead to the identification of suitable guidelines and best practices to develop the fabric and functioning of South African education system.

It is clear from comparison between the educational objectives of BRICS and the South African education system that the respective educational objectives of BRICS establish a supportive environment for meaningful reciprocal cooperation amongst its member states. Accordingly, the South African education system is able to contribute to the enrichment of quality international educational cooperation in BRICS and, at the same time, support improvement in the nature and functioning of the South African education system.

■ Conclusion

In order to understand the education system of a particular country, it is important to understand the aims of the education system and their interrelation with the internal and external functioning of the education system of that country. The level to which different educational organisations could collaborate is determined by the way in which their aims are informing one another.

In order to meet international standards relating to education, it is important for South Africa to consider global developments regarding the aims of an education system and explore the level to which the aims of its education system are compared with those of other education systems and education projects, such as the education project of the BRICS organisation. The comparative method of research has been used to determine whether the aims of an education project of the BRICS organisation and those of the South African education system support each other.

The educational objectives of BRICS are particularly focused on concrete issues that are important to promote the functioning of the BRICS organisation, such as the promotion of cooperation, sharing of best practices and cooperation in the fields of vocational and higher education. On the other hand, the aims of South African education system could be summarised in its vision, which states that it is the joint responsibility of all South

Africans to help build a sensible education system of high quality for all citizens, characterised by a common culture of disciplined commitment to teaching and learning.

The main gap between the aims of South African education system and the educational objectives of the BRICS organisation seems to be the absence of any explicitly written reference in the aims of South African education system about improving involvement in the field of higher education and the transferability of educational qualifications internationally.

These shortcomings provide an opportunity to improve the alignment between the aims of South African education system and the educational objectives of the BRICS organisation in order to strengthen education as a common interest within the BRICS organisation and enhance the effectiveness of the South African education system.

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The central focus of the book is on the education systems of the BRICS countries. It moves from theoretical perspectives, to the context of BRICS (historical, and within the global context), to details about the organisation, and then provides comparable details of each country's education system. The content of the work is relevant, as the BRICS organisation is current, and such work focusing on education, and specifically on what each education system wants to achieve, has not seen the light prior to this. Appropriate for a book within the field of Comparative and International Education, the method that is used is that of comparison. The premise of the book is that BRICS was founded on the principles of cooperation, to enhance the interests of the member states in many different areas. One of the important areas of potential cooperation is education. While this book *inter alia* specifically focuses on the aims of individual BRICS countries, in view of the education objectives of the BRICS member states as well as the Education For All (EFA) goals, I do believe there is scope to follow this up with similar work on other aspects of the education system. The importance of the book, in my view, is that it can be used by scholars and policy makers as a comprehensive, and theoretically grounded work on the direction that education systems within BRICS and across BRICS countries take.

**Prof. Lynette Jacobs, Department of Distance Learning, South Campus,
University of the Free State, Bloemfontein, South Africa**

This book, when published, will surely be a significant academic reference for those who would like to learn more from the recent development of BRICS education in general, and for those who would like to have a deep understanding of the contexts, aims and issues of education in Brazil, Russia, India, China or South Africa, separately and independently. This book will be of interest to academic researchers, scholars, policy makers, educational practitioners, doctoral candidates and research students in the field of Comparative and International Education. This book is the first holistic research and thorough publication about BRICS Education in the literature. Since the development of BRICS education is in its infancy, there is limited research and publications in the area, so BRICS education is at a new dawn! That is, a well identified and chosen topic of the book outlining its relevance to the aims and objectives of this publication. The collective efforts by various authors have significantly contributed to the development of a new discipline. The authors in this book have coined 'BRICSology', which describes, symbolically and epistemologically, the enquiry and investigation into BRICS Education, and which encourages an international collaboration in research into BRICS education in future. 'BRICSology' would become a proper term that signifies such a movement, and a new academic discipline in social science will emerge.

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