

Joseph Zajda

Globalisation and Education Reforms

Creating Effective Learning
Environments

Globalisation, Comparative Education and Policy Research

Volume 25

Series Editor

Joseph Zajda, Faculty of Education and Arts, Australian Catholic University
East Melbourne, VIC, Australia

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The *Globalisation, Comparative Education and Policy Research* book series aims to meet the research needs of all those interested in in-depth developments in comparative education research. The series provides a global overview of developments and changes in policy and comparative education research during the last decade. Presenting up-to-date scholarly research on global trends, it is an easily accessible, practical yet scholarly source of information for researchers, policy makers and practitioners. It seeks to address the nexus between comparative education, policy, and forces of globalisation, and provides perspectives from all the major disciplines and all the world regions. The series offers possible strategies for the effective and pragmatic policy planning and implementation at local, regional and national levels.

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Joseph Zajda

Globalisation and Education Reforms

Creating Effective Learning Environments

 Springer

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To Rea, Nikolai, Belinda, Sophie and Imogen

Foreword

Globalisation and Education Reforms: Creating Effective Learning Environments, the 25th book in the 36-volume book series *Globalisation, Comparative Education and Policy Research*, analyses discourses of effective learning environments globally. It focuses on students' self-concepts, cultural identity and academic achievement, the significance of cultural and social capital to student's academic achievement, motivational strategies, effective teaching strategies, and quality in education. The book discusses and evaluates the shifts in methodological approaches to effective learning environments. The book analyses such topics as motivational strategies for creating effective learning environment, constructivist pedagogy, dimensions of discrimination in schools globally, intelligence testing and its effects on academic achievement, and the impact of values education in the classroom on academic achievement. The book demonstrates a complex nexus between globalisation, ideology and education reforms, for creating effective learning environments – where, on the one hand, democratisation and progressive pedagogy is equated with equality, inclusion, equity, tolerance and human rights, while on the other hand, globalisation is perceived, by some critics at least, to be a totalising force that is widening the socio-economic status (SES) gap and cultural and economic capital between the rich and the poor, and bringing power, domination and control by corporate bodies and powerful political, economic and educational organisations. The book contributes in a very scholarly way to a more holistic understanding of the nexus between globalisation, comparative education research and education reforms for creating effective learning environments. The book analyses some of the major factors affecting students' academic achievement in schools, in the standards and performance oriented culture. The chapters offer a timely analysis of current issues affecting schooling and strategies for creating effective learning environments globally. The book provides innovative ideas concerning the future directions that education and policy reforms could take, in order to promote equity, and access to quality of education for all.

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Series Editor

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His works are found in 445 publications in 4 languages and some 11,010 university library holdings globally.

He is the recipient of the 2012 Excellence in Research Award, Faculty of Education, Australian Catholic University. The award recognises the high quality of research activities, and particularly celebrates sustained research that has had a substantive impact nationally and internationally. He was also a recipient of the Australian Awards for University Teaching in 2011 (Citation for Outstanding Contributions to Student Learning, for an innovative, influential and sustained contribution to teacher education through scholarship and publication). He received the Vice Chancellor's Excellence in Teaching Award, at the Australian Catholic University (Melbourne Campus). He was awarded an ARC Discovery Grant (with Monash University) for 2011–2015 for a comparative analysis of history national curriculum implementation in Russia and Australia (\$315,000). Elected as Fellow of the Australian College of Educators (June 2013).

Completed (with Professor Fred Dervin, University of Helsinki) the UNESCO report: *Governance in education: Diversity and effectiveness. BRICS countries*. Paris: UNESCO (2021).

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Preface

Series title: Globalisation, Comparative Education and Policy Research (36-volume series)

Globalisation and Education Reforms: Creating Effective Learning Environments, which is **volume 25** in the 36-volume book series *Globalisation, Comparative Education and Policy Research*, by Joseph Zajda, presents a global overview of the nexus between globalisation, ideologies and current trends in schooling to promote effective and engaging environments, and implication for equity, democracy and social justice. Globalisation and the competitive market forces have generated a massive growth in the knowledge industries that are having profound effects on society and higher educational institutions. One of the effects of globalisation is that the education sector is compelled to embrace the corporate ethos of the efficiency, performance, and profit-driven managerialism. As such, new entrepreneurial educational institutions in the global culture succumb to the economic gains offered by the neoliberal ideology and governance defined fundamentally by economic factors.

Both governments and educational institutions, in their quest for global competitiveness, excellence, quality and accountability in education, increasingly turn to international and comparative education data analysis. All of them agree that the major goal of education is to enhance the individual's social and economic prospects. This can only be achieved by providing quality education for *all*.

By focusing on education reforms for creating effective learning environments, the book analyses some of the major factors affecting students' academic achievement in schools, in the standards and performance oriented culture. Topics include motivation in the classroom, the use of constructivist pedagogy to increase students' engagement, types of discrimination in the classroom, the use of intelligence testing in schools, values education, and education quality. The chapters offer a timely analysis of current issues affecting schooling and strategies for creating effective learning environments globally.

By examining some of the major factors influencing the nature of effective and engaging environments in schools, particularly in the light of recent shifts in education reforms and policy research, the book provides a comprehensive research findings of the intersecting and diverse discourses of globalisation, education and

engaging environments in schools. The impact of globalisation on education policy and reforms, and the emerging role of effective and engaging environments, is a strategically significant issue for us all. As a sourcebook of ideas for researchers, practitioners and policy makers in the area of effective and engaging environments, the book provides a timely overview of current developments in creating engaging environments in schools globally.

East Melbourne, VIC, Australia

Joseph Zajda

Editorial by the Series Editor

Globalisation and Education Reforms: Creating Effective Learning Environments (Volume 25) is a further publication in the Springer Series of books on Globalisation, Comparative Education and Policy Research, by Joseph Zajda.

Joseph Zajda's monograph *Globalisation and Education Reforms: Creating Effective Learning Environments*, the 25th book in the 36-volume book series Globalisation, Comparative Education and Policy Research, focuses on discourses of effective learning environments globally.

There have been the following two significant paradigm shifts since the 1950s relevant to discourses in comparative education research: structural-functionalist and post-structuralist. In comparative education research, the *structural-functional* paradigm was known for defining and propagating the notion of a single subject, or a single identity, unlike post-structuralism, especially post-modernism, which focused on multiple subjectivities and multiple interpretations of the phenomena under investigation. The second paradigm shift, which was *post-structuralism*, occurred in 1960s. It was a complex and diverse paradigm, consisting of a number of perspectives, such as discourse analysis, deconstruction, post-modernism, and social and cognitive constructivism, to name a few. Discourse analysis has been taken up in a variety of social science disciplines, examining the sorts of tools and strategies people use when engaged in communication, such as the use of metaphors, choice of particular words to display affect, and how people construct their own version of an event, and how people use discourse to maintain or construct their own identity.

It is argued that that one of the most significant variables in creating effective learning environments in schools is the student's identity, the self-concept and self-esteem. The book analyses the nexus between the self-concept, cultural identity and academic achievement in schools. The next variables influencing students' learning environment are motivational strategies, self-regulated learning, and students' active engagement in constructivist learning. Other major variables affecting students' academic achievement include classroom discrimination, the use of intelligence testing to stratify students according to perceived abilities, and the impact of values education on students' academic achievement.

I want to express my deep gratitude to Suzanne Majhanovich (Western University, Ontario), Anatoli Rapoport (Purdue University), Sev Ozdowski (University of Western Sydney), and Vince Wright (education consultant, Taupo, New Zealand) for their insightful and constructive comments, and I am also grateful to the anonymous international reviewers who reviewed the chapters in the final manuscript.

Contents

1	Creating Effective Learning Environments in Schools Globally	1
	Major Factors Defining and Influencing Effective Learning	
	Environments Globally	1
	Defining Characteristics of Self-Concept	3
	Carl Rogers’s Theory of the Self.	3
	George Kelly and the Self.	4
	The Self-Concept and Classroom Implications	4
	Cultural Identity	4
	Cultural Identity	4
	Global Cultural Identities	7
	Knowledge and Cultural and Social Capital	8
	Effective Learning Environments: Factors Influencing	
	Schooling and Academic Achievement.	9
	Motivation in the Classroom: Creating Effective Learning	
	Environments	13
	Quality in Education	14
	Conclusion	15
2	Motivation in the Classroom: Creating Effective Learning	
	Environments.	17
	Motivation in the Classroom: Creating Effective Learning	
	Environments: Introduction	17
	Definition of Motivation	19
	Contemporary Views of Motivation in the Classroom	20
	Behavioural Theories of Motivation	21
	Cognitive Theories of Motivation	23
	Socio-Cultural Theory of Motivation	26
	Humanistic Theories of Motivation	28
	Application of Motivational Approaches in the Classroom	29
	Behavioural Approaches to Motivation	30
	Cognitive Approaches to Motivation	30

- Social Learning Approaches to Motivation 30
- Humanist Approaches to Motivation 31
- Discussion 31
- The Spiral Model of Motivational Theories 33
- Conclusion 33
- 3 Constructivist Learning Theory and Creating Effective Learning Environments 35**
- Constructivism in Learning 35
- The History of Constructivism 36
- Constructivist Theory 37
- Constructivist Approaches: Two Major Strands of the Constructivist Perspective 40
- Social-Cultural Constructivism 40
- Constructivist Learning in the Classroom 43
- Individual Differences and Learning Styles 43
- Effective Teachers and Teachers' Knowledge 44
- Effective and Engaging Teachers 45
- Cultural Influences 46
- Improving Constructivist Pedagogy: Learning and Teaching 47
- Suggestions for Constructivist Pedagogy 48
- Evaluation 49
- Conclusion 50
- 4 Discrimination and Self-Fulfilling Prophecy in Schools Globally . . . 51**
- Global Discrimination and Discriminatory Practices: Introduction 51
- What Is Discrimination? 51
- Legal and Ethical Implications of Discriminatory Practices in Schools 52
- Discrimination in Schools 53
- The Ideology of Meritocracy 55
- Learning Discrimination in the Classroom 56
- Learning Styles 57
- Learning Modality Discrimination 58
- Intelligence Discrimination 58
- Race and Ethnicity Discrimination 60
- Self-Fulfilling Prophecy and Key Principles 64
- The Pygmalion Effects 65
- Example of a Positive Self-Fulfilling Prophecy 66
- Self-Fulfilling Prophecy in Life 67
- How Teachers Communicate Expectations 67
- Conclusion 69
- 5 Current Research of Theories and Models of Intelligence Globally 71**
- Introduction to the Research on Intelligence Theories and Models 71
- Background into g-Centric Theories of Intelligence 72

Genome Research	73
Major Models of Intelligence	73
Intelligence Defined and Constructed	75
Traditional Models of Intelligence	76
Psychometric Theories of Intelligence	77
Critique of Psychometric Theories of Intelligence	78
Cognitive-Contextual Theories of Intelligence	79
Critique of Cognitive-Contextual Theories of Intelligence	80
Piaget Theory of Cognitive Development	81
Guilford’s Cube	82
Sternberg’s Triarchic Intelligence Model	82
Gardner’s MI Model	82
Research Findings on Intelligence, Genetics and Environment	83
Intelligence Testing	84
Aptitude and Intelligence	84
Stanford-Binet Intelligence Quotient	85
Wechsler Intelligence Scale for Children (WISC)	85
Woodcock Johnson Test of Cognitive Ability	86
Aptitude and Achievement Tests	86
Evaluation	87
Conclusion	88
6 Values Education and Creating Effective Learning	
Environments: A Global Perspective	91
Globalisation as a Multi-faceted Phenomenon: Implications for Values Education	91
Defining Values	91
Values Education	93
Cultural Origins of Values	94
Global Models for Values Education	95
Local and National Values	96
Urie Bronfenbrenner’s Model	96
James Banks and His Model for Multicultural Education	97
Values Education in Schools	97
The Nature of Values in Schools	98
The Politics of Values Education	99
Moral Dilemmas	100
Incorporating Values into the History/HUMANITIES Curriculum	101
Values Education in Humanities and Social Sciences	101
Objectives of Values Education in the Classroom	102
Classroom Strategies for Teaching Values	103
Values Education and Academic Achievement	104
Evaluation	106
Conclusion	107

7 Education Quality in Schools: Researching Dominant Paradigms 109

Quality Debate in Education: Introduction..... 109

 Global Standards of Academic Achievement 109

Defining Education Quality 110

 Education Quality Global Definition 111

 Education Quality: Input and Output Policy Perspective 111

 Education Quality: Students’ Academic Performance 112

 Education Quality: Contesting Metaphors 113

The Quality of Education Debate in Education 114

Re-conceptualising of the Quality Debate 116

 Quality for All..... 117

 Conclusion 118

References 119

Index..... 139

Chapter 1

Creating Effective Learning Environments in Schools Globally



Major Factors Defining and Influencing Effective Learning Environments Globally

When we think of creating effective learning environments for students in schools globally, numerous ideas come to mind. Where do we start? I want to suggest that we start with the student's self-concept and cultural identity. Students' identities and the self-concepts are significant factors impacting on students' motivation in the classroom, and their attitudes to learning and performance. In the past, educational discourses were dominated by such functionalist concepts as the process of learning, behavioural Bloom's knowledge taxonomies, academic achievement, content and skills. Bruner (1960), for instance, in his book *The process of Education* discussed the themes of structure, readiness, intuition and interest. These concepts, especially Bruner's emphasis on teaching principles, to facilitate meaningful learning, continue to be relevant today. Over the last six decades we have acquired a great deal of research-informed knowledge on the student's self, cultural identity, schooling, and some of the key factors affecting students' academic achievement and motivation to learn.

To me, the most significant key ideas and concepts affecting all aspects of quality learning in schools, affecting students' academic achievement globally begin necessarily with the student's cultural identity, self-concept, self-esteem, self-efficacy, motivation to learn, and active engagement. There is a great deal of research demonstrating the nexus between the self-concept and academic achievement, starting with Purkey (1970, 1988), and followed by numerous education researchers, including Byrne (1990), Guay et al. (2003), Marsh and Martin (2011), Ghazvini (2011), Laryea et al. (2014), Pegalajar-Palomino (2017), Zajda (2021) and others.

The nexus between academic self-concept and performance was analysed by Guay et al. (2003), who tested theoretical and developmental models of the causal ordering between academic self-concept and academic achievement. Participants in

their study consisted of students in Years 2, 3, and 4 from 10 elementary schools. Their structural equation model for the total sample had proven a reciprocal-effects model, demonstrating that ‘achievement has an effect on self-concept’ and consequently academic self-concept effected achievement (Guay et al., 2003, p. 124). Similarly, Marsh and Martin (2011) in researching academic self-concept and academic achievement discovered the link between academic self-concept and achievement. Their findings demonstrated that increases in academic self-concept lead to increases in subsequent academic achievement and other desirable educational outcomes. Their research findings confirmed that not only is the self-concept an important outcome variable in itself, it also plays a central role in ‘affecting other desirable educational outcomes’ (Marsh & Martin, 2011, p. 59). In another study, Ghazvini (2011) examined the relationship between the academic self-concept and academic performance among 363 students from 10 high schools. The research finding demonstrated a ‘close relationship between academic self-concept and measures of academic performance’ (Ghazvini, 2011). It was also found that academic self-concept strongly predicted general performance in literature and mathematics. Furthermore, academic self-concept is normally enhanced by student’s self-regulated learning skills and strategies. Self-regulated learning (SRL) is a key conceptual framework for understanding the cognitive, motivational, socio-cultural and emotional aspects of students’ learning (Panadero, 2017).

In addition to the student’s self-concept, we also need to think of time, place, school’s location, and country. Students globally, depending on where they are located and how they are shaped by major agencies of socialisation, are likely to display different attitudes, values, and behaviour patterns towards schooling. If you can imagine for one moment a spiral curriculum, as a concept map, you can place the student’s self at the centre of this dynamic and pulsating spiral. Each level of the spiral will contain major agencies of socialisation in the following descending order: the family, the peers, the neighbourhood, the school, teachers, the media, and the community. The spiral curriculum concept was first used and developed by Bruner (1960), to explain the stages of learning and meaning-making process. According to him, the spiral curriculum resulted in information being structured in such a way, where complex ideas can be taught at a basic level first, and then re-imagined, in a constructivist sense, at a deeper cognitive level, and adding new knowledge to the existing knowledge. As Bruner, explained:

We begin with the hypothesis that any subject can be taught effectively in some intellectually honest form to any child at any stage of development. (Bruner, 1960, p. 33)

Bruner popularised the ideas of experiential learning and constructivism in education. In my concept map of the spiral curriculum, which transgresses the boundaries between disciplines and content, I also add all major shapers, or agencies of socialisation, together with student’s identity and the self-concept.

Defining Characteristics of Self-Concept

The student's self-concept, together with self-esteem and self-efficacy will invariably play a major role in the overall learning process, academic achievement and motivation to learn and do better. Some of the factors to be considered, when defining the self-concept include:

- Conceptual variations of the definition including: what an individual believes he/she is. Self-concept is more about your perception of the kind of person you are.
- It is developed primarily through one's interpretations of praise from others. We reflect in our minds how we think others see us.
- These beliefs are memorised and will likely to influence one's future behaviour.
- People get confused between self-concept, or totality of self-knowledge and self-esteem, or evaluative component of self-concept.
- Cross-cultural constructs of the self-concepts.

The self-concept can be defined as the totality of a '*complex, organised, and dynamic system of learned beliefs, attitudes, values and opinions*' that each person holds to be true about his or her identity (Purkey, 1988). Self-concept beliefs are hierarchical, and we have different perceptions of ourselves, depending on what we are discussing i.e. I'm a good athlete, but a bad son, good at Maths and bad at music.

What factors shape and construct the self-concept? As explained above, the self is shaped by a number of shapers, or major agencies of socialisation. A self-image is a learnt one and is constructed by the descriptions provided by others. G. H. Mead suggested that the self consists of two interrelated dimensions: the *subject* (the 'I') and the *object* ('me'). The picture one has of '**me**' includes what one knows about one's personality and all other things, which give one's the sense of being who one is. But is it really you or a socially constructed label of wants, needs, and desires? Some researchers have argued that the self has evolved into a global consumerist commodity. Hence, the notion of the commodification of the self is relevant to discourses surrounding the identity.

Carl Rogers's Theory of the Self

Carl Rogers (1961) focused on the self-as-object, or the 'me' aspect of the self. It is a phenomenological theory, being concerned with the person's subjective experience of the world. He believed in the importance of positive regard. Positive regard refers to the idea that learners are born with a basic need for the positive regard: the acceptance and approval of others. Is this need the main socialising force defining and shaping their values and behaviour? When these needs are met then the individual develops a **self**, which is in congruence (or harmony) with it. If not, there is incongruence or a gap between the *ideal self* and the **real self**, hence self-rejection, alienation and hostility towards the rest of the world/humanity. The self-concept is

affected by self-esteem. Self-esteem, or positive self-regard, according to Rogers, is concerned with the **value** we place upon ourselves, and features prominently in Maslow's hierarchy of needs.

George Kelly and the Self

Like Rogers, Kelly (1955) was a phenomenologist (where people wish to make sense of their own experiences). Constructing meanings about reality and our lives lead Kelly to coin **personal constructs** the units of meaning we develop to make sense of the world. We have personal constructs about every phenomenon of our lives (Kelly, 1966; see also Piaget, 1977).

The Self-Concept and Classroom Implications

Do students' academic self-beliefs determine their academic achievement, or does academic achievement determine the self-beliefs? (Herrera et al., 2020). There are two types of motivation researchers: self-enhancement researchers, who think that self-concept beliefs are a primary cause of student achievement (we do well because we feel good). Hence, fostering students' **self-esteem** should be number one priority in the classroom. Whereas skill-development researchers argue that **self-concept** beliefs are a consequence rather than a cause of academic achievement (we feel good because we do well) therefore focusing on academic competence is more useful than focusing on self-beliefs. It has been impossible so far to determine which is right, as experiments and research in this area is difficult. Some researchers currently support the idea that *both* self-belief/efficacy and achievement have reciprocal influences on student motivation. One could argue that both **self-concept** and **self-efficacy**, like the status and the role, are the two sides of the coin.

Cultural Identity

Cultural Identity

Globalisation has contributed, among other things, to 'the strengthening of various cultural identities: religious, national, ethnic, and geographic' (Castells, 2006; see also Castells, 2010; Ariely, 2012; Napier & Majhanovich, 2013; Zajda & Majhanovich, 2021). The construct of cultural identity is associated with a reification of culture, similar to Marx's notion of 'reification', which becomes a defining feature of the dominant discourse on identity (Bauman, 1996). Reification is the

process of attributing concrete form to an abstract concept. Reification was first used by Marx to describe a form of ‘social consciousness in which human relations come to be identified with the physical properties of things, thereby acquiring an appearance of naturalness and inevitability’ (Burris, 1988). Using the concept of reification, Marx tried to explain why workers accepted their labour and wages exploitation as natural (see also Berman, 1991).

More importantly, Hall (1996) argued that identity is always positioned in the cultural context and, as such, is dynamic, as a continuous cultural process:

Identity is not as transparent or unproblematic as we think. Perhaps instead of thinking of identity as an already accomplished fact, which the new cultural practices then represent, we should think, instead, of identity as a ‘production’, which is never complete, always in process, and always constituted within, not outside, representation. This view problematises the very authority and authenticity to which the term, ‘cultural identity’, lays claim. (Hall, 1996)

The usage of the term ‘identity’ can be traced to historical traditions in Western philosophy and intellectual thought, in particular to philosophers John Locke (1690) in his *An Essay Concerning Human Understanding* (1689) and David Hume (1785) in his *Essays on the Intellectual Powers of Man*. *Locke (1690) wrote that identity consists of:*

... nothing but a participation of the same continued Life...consciousness always accompanies thinking. ...in this alone consists *personal Identity*. (Locke, 1690/2008)

The term ‘identity’ became a key word in the 1950s, when Carl Rogers (1961), a noted humanistic psychologist, used the term to study the self-concept. Eric Erickson (1950), a prominent psychoanalyst, also used the term to study adolescent personality/identity crises. Erikson, in *Childhood and Society* (1950), used a more holistic notion of ‘national identities’, which was his preferred term. Since then, there has been an incredible proliferation of the use of the term, across various disciplines and theoretical perspectives, referring to **cultural identity**, **ethnic identity**, **racial identity**, **religious identity**, **sexual identity**, gender identity, institutional identity, interest identity tribal identity, passport identity (as part of the documentation identity), identity credit cards, and **identity politics, to name a few**.

In order to simplify the discourse of cultural identity, I propose to delineate between global and cultural perspectives of identity. A global perspective of identity was first used by Comenius (1592-1670), when he wrote that ‘we are all citizens of one world’:

We are all citizens of one world; we are all of one blood. To hate a man because he was born in another country, because he speaks a different language, or because he takes a different view on this subject or that, is a great folly. Desist I implore you, for we are all equally human...Let us have but one end in view, the welfare of humanity. (Comenius, 1649/1907)

A cultural perspective of identity refers to local identities, defined by a particular culture, language, religion, values and location (Zajda, 2018a, b, c, d; Zajda & Majhanovich, 2021). Within many local communities there is a widespread consensus on what characterises their local identity. Language is intrinsically connected to personal, national, and ethnic identity

‘National identity’, according to Anthony Smith (1991), ‘involves some sense of political community, history, territory, patria, citizenship, common values and traditions’ (Smith, 1991, p. 9). He argued, using a structuralist perspective that ‘nations must have a measure of common culture and a civic ideology, a set of common understandings and aspirations, sentiments and ideas that bind the population together in their homeland’ (Smith, 1991, p. 11). National identity, according to Guibernau (2001) is a type of collective identity grounded in ‘past symbols, memories, and values linked to a specific territory that distinguishes itself from other nations and also projects into the future’ (Guibernau, 2001). More importantly, Smith (1991) also considered national identity as a multi-dimensional construct and listed five fundamental attributes:

- historic territory or homeland
- common myths and historical memories
- a common, mass public culture
- common legal rights and duties for all members
- common economy with territorial mobility for members (Smith, 1991, p. 14).

In addition to understanding the nature of cultural identity, Smith (1991) offered a structural analysis of the cultural components of national identity. It included values, beliefs, customs, conventions, habits, languages and practices transmitted to the new members, who receive the culture of a particular nation. The process of identification with a specific culture implies a strong emotional investment able to foster solidarity bonds among the members of a given community, who come to recognize one another as fellow nationals (Gellner, 1983). Furthermore, they imagine and feel their community as separate and distinct from others (Anderson, 1983). Anderson (1983) defined a nation as ‘an imagined political community [that is] imagined as both inherently limited and sovereign’ (Anderson, 1983, p. 6).

More importantly, the impact of globalisation on national identity was noted by Smith (1995), who argued that national identity was affected by globalisation:

...it would be folly to predict an early supersession of nationalism and an imminent transcendence of the nation. ... For a global culture seems unable to offer the qualities of collective faith, dignity and hope that only a ‘religious surrogate’ with its promise of a territorial cultural community across the generations can provide. (Smith, 1995, p. 160)

There is no doubt that students’ cultural identities, in terms of attitudes, beliefs, values, languages and practices, also affects learning and academic achievement, both locally and globally (Rodriguez et al., 2004; McDonald, 2007; Huitt et al., 2009; Ligorio, 2010; Altugan, 2015). Altugan (2015) argued that the identity of learners affects their motivation and concluded that cultural identity has an important effect on learning:

The researcher has experienced different attitudes of learners, who seem to have different cultural identity, like one learner tried to marginalize while the other highly valued learning and have been interested in to find out if there is a link between their motivation of learning and their cultural identity. Depending on the findings, it is clear that cultural identity is an important effect on learning and should be taken into consideration while teaching and learning. (Altugan, 2015)

Rodriguez et al. (2004) described the nexus between student's identity and academic achievement. Their research study focused on Year 10 students and the development of their academic identity and cultural awareness through the implementation of culturally responsive teaching practices. Similarly, Ligorio (2010) in her dialogical relationship between identity and learning research, argued that it is necessary to study the effects of the relationship between learning and identity.

Global Cultural Identities

Since the 1980s, two parallel social, political, economic and technology-driven forces have impacted on the world. On one hand, the ubiquitous processes of globalisation affecting everything are occurring and, on the other, the transformation and reaffirmation of nation-building and cultural identities, both locally and globally, are taking place. Castells (2010) believes that globalisation, with its cultural homogenisation, was a potential threat to local cultures and to specific identities. This is due to globalisation perceived to be generating a global, cosmopolitan culture, and cultural homogenisation. At the same time, due to dominant political and religious ideologies, some nations wanted to preserve their historically-defined identities, based on language, nationality, ethnicity, religion, territory, and other relevant identity-defining characteristics. This has resulted in the local and global cultural identity dichotomy.

Discourses of cultural identity suggest that national identity is not fixed, but dynamic in nature, affected by dominant forces of globalisation and the media. One of the most powerful forces of globalisation shaping cultural identities is the ubiquitous presence of information technology and the mass media. Every facet of culture and identity is defined by the mass media, and propelled by the information technology. Global marketing of socially desirable commodities, such as clothing, fashion and global brands, perfumes, toys, and the entertaining industry, to name a few, has affected cultural identity. Global marketing affecting the formation of one's cultural identity has manufactured a new consumerist and materialistic culture, of 'commodification of the self' (Zajda, 1988).

Cultural identity discourses demonstrate a complex nexus between globalisation, cultural identity and ideology. Recent research indicates that cultural identity discourses have shifted from one dimensional concept towards multidimensional concept of cultural identity. Hence, there is a need to position cultural identity research and various discourses surrounding cultural identity within dominant ideologies, and identity politics.

Knowledge and Cultural and Social Capital

In addition to the student's self-concept and the role of cultural identity affecting learning and performance in schools, I would like to discuss the significance of cultural and social capital, in knowledge acquisition, with reference to student's learning and academic achievement (Bourdieu & Passeron, 1977; Bourdieu, 1986; Saha, 2003; Wildhagen, 2016; Tan et al., 2019). Saha (2021), who has written a number of works on this topic, argues that cultural and social capitals are closely related and that 'both are part of a family of concepts having to do with various forms of capital' (Saha, 2021). He refers to Bourdieu (1986), who has written a great deal on the topic. Bourdieu coined the term and introduced the concept of cultural capital in 1973 in his co-authored paper with Jean-Claude Passeron. The term 'cultural capital' refers to knowledge, attitudes and values covering:

...the symbols, ideas, tastes, and preferences that can be strategically used as resources in social action. He sees this cultural capital as a 'habitus', an embodied socialized tendency or disposition to act, think, or feel in a particular way. (Bourdieu & Passeron, 1977)

According to Bourdieu (1986), 'Capital is accumulated labour...which, when appropriated on a private, i.e., exclusive, basis by agents or groups of agents, enables them to appropriate social energy in the form of reified or living labour' (Bourdieu, 1986, p. 241). Bourdieu (1986) also suggested that cultural capital exists in three forms: the embodied state, the objectified state, and the institutionalized state. The embodied state, according to Bourdieu (1986) referred to the 'long-lasting dispositions of the mind and body', whereas the objectified state dealt with cultural goods, or commodities, and the institutionalized state resulted in a 'form of objectification'. Furthermore, as Bourdieu noted, capital has the potential capacity to 'produce profits'. The first documented use of the concept of cultural capital occurred in the research of Bourdieu and Passeron (1977) in their research on French university students. Saha (2021) argues that the concept of cultural capital has major implications for the process of social reproduction and social mobility.

The concept of cultural capital was developed further by Bourdieu and Passeron (1977) in their book *Reproduction in education, society and culture* (1977). Later, Bourdieu also added social, economic and symbolic form of capital (Saha, 2005). 'Social capital', as defined by the OECD (2001) is networks together with shared norms, values and understandings that facilitate co-operation within or among groups.

In this definition, we can think of networks as real-world links between groups or individuals. Cultural capital also includes desired knowledge and skills and artefacts, which provide the necessary advantages for upward social mobility. On the other hand, 'economic capital', like cultural capital, refers to the unequal distribution of socially valued commodities such as ownership of economic resources: wealth, income, money, and property.

Saha (2021) also suggests that while 'all cultures have their forms of cultural and social capital', the important point is to determine which one is dominant:

However the crucial issue in the case of contact between two or more cultures is which one is dominant. Therefore the issue of globalization is the extent to which the “global” dominates the “local”, and whether the “global” in effect reflects a particularly dominant form of cultural and social capital, for example Western as opposed to non-Western, Christian as opposed to non-Christian, or individualist as opposed to collectivist. (Saha, 2021)

Saha (2021) also argues that forces of globalisation affect our perception, values and knowledge of cultural and social capitals in different ways:

For example, a local form of cultural capital, such as knowledge of indigenous art or literature, may be overtaken by a global form of art and literature knowledge, such as Western art and literature. Thus persons who had previously possessed highly valued local knowledge might find that that knowledge is no longer valued, and therefore is no longer cultural capital in the true sense of the concept. In other words, it cannot be exchanged for academic or economic capital.

Cultural and social capitals are two important concepts in understanding and critiquing education and students’ academic achievement. Earlier, Saha (2005) explained how globalisation, and cultural and social capitals affected students’ academic achievement:

They have been found to be particularly important in understanding educational processes, and in particular why some children do well in school and others do not. The globalisation processes occurring in the world today are likely to increase, rather than decrease, the amount of cultural and social capital available. Furthermore access to cultural and social capital is likely to be less dominated by a particular social or national group, given the manner of access through cyber networks. However, little research has been conducted on this most current change in the globalisation process, and therefore many of the arguments remain to be tested. (Saha, 2005, p. 703)

Consequently, the unequal distributions of socially valued commodities, such as cultural and social capital, play a major role in children’s education and their performance in schools. It may also explain not only educational stratification and divided schools phenomenon of government versus independent schools, but the resultant differences in educational outcomes and academic achievement of students in schools globally (Woods, 2014; Zajda, 2020a; Zajda & Rust, 2021).

Effective Learning Environments: Factors Influencing Schooling and Academic Achievement

Hattie (2012), in his major meta-analysis of education research, dealing with improving students’ classroom performance, Hattie (2012) focused on the significance of making teaching and learning visible, in order to improve students’ academic performance. The concept of visible learning was the result of Hattie’s 15 years of research and syntheses of over 800 meta-analyses, covering some 50,000 studies, relating to the influences on achievement in school-aged students. It presented the largest ever collection of evidence-based research into what actually works in schools to improve learning. He argued that teachers need to regularly

evaluate the ‘effects they have on their students and adjust teaching methods accordingly’:

When learning is visible the student knows what to do and how to do it and the teacher knows if learning is occurring or not. Teaching and learning is visible when the learning goal is not only challenging but is explicit. (Hattie, 2012)

Originally, Hattie (1996) studied six areas that contributed to learning: the **student**, the **home**, the **school**, the **curricula**, the **teacher**, and **teaching and learning approaches**. The updated list also included the classroom. But Hattie did not only provide a list of the relative effects of different influences on student achievement. He also discovered that the key to making a difference in the classroom, was making teaching and learning more visible. He further explained this theory in *Visible learning for teachers* (2009). This unique and ground-breaking book was the result of 15 years research, which synthesised over 800 meta-analyses, and evaluating over 50,000 research publications dealing with the influences on achievement in school-aged students. It focused on the power of teachers, feedback, and a model of learning and understanding. This research is now based on nearly 1200 meta-analyses, up from the 800, when *Visible Learning* came out in 2009. According to Hattie (2012), the evidence underlying the data has hardly changed over time. It presented the largest ever collection of evidence-based research into what actually works in schools to improve learning. Hattie’s (2012) innovative idea was ‘know thy impact’, or that teachers should continually evaluate the effects of their teaching on students. Hattie (2012) argued that expert teachers are not ‘wedded to specific ideas, but instead focus regularly on evaluating the effects they have on their students and adjust teaching methods accordingly’:

Visible learning involves teachers seeing learning through the eyes of students; and students seeing teaching as the key to their ongoing learning. When learning is visible the student knows what to do and how to do it and the teacher knows if learning is occurring or not. Teaching and learning is visible when the learning goal is not only challenging but is explicit. https://www.egfl.org.uk/sites/default/files/School_effectiveness/5a%20What%20is%20Visible%20Learning.pdf

When examining major factors affecting academic achieving in schools, researchers, according to Hattie (1996) have listed the following major variables: school environment, social factors, teaching, students, method of teaching, learning strategies and the school. His research findings demonstrated that the most significant factors impacting on students’ academic achievement were:

1. Students’ learning strategies, specifically reinforcement (0.49 correlation)
2. Teaching, specifically questioning techniques (0.47 correlation)
3. Students’ cognitive development (0.44 correlation)
4. Social and cultural factors at home (0.31 correlation)
5. Teachers’ Feedback (0.31 correlation)
6. Classroom environment and the school (0.20 and 0.12 correlations respectively)

Later, in his research findings, Hattie (2012) defined effective teachers in terms of the following nine factors:

1. Evaluators of the effect of their teaching on pupil's learning
2. 'Change Agents' who take responsibility for enhancing all pupils learning.
3. Talk about how pupils learn and not about how teachers teach.
4. Using assessment as feedback about their impact on students' achievement.
5. Engaging in dialogue, not monologue with students.
6. Enjoying the challenge and engaging students in the challenge.
7. Developing positive relationships with students that foster effective learning.
8. Having a common and shared language of learning which is understood by all in the classroom setting.
9. Teaching students the value of concentration, perseverance and deliberate practice.

What Factors Define Effective Teachers in the Classroom?

In contrast to Hattie (2012), I would like to suggest the following qualities defining engaging and effective teachers:

1. Effective teachers believe that all students have a potential to learn.
2. Devote the majority of the day to quality teaching, by means of variety of tasks and methods.
3. Create supportive and inclusive classroom learning environments that are well managed to allow diversity of learning to take place.
4. Individualize classroom teaching to meet the needs of each student, and keep students continually engaged.
5. Demonstrate the quality and value-added learning in ways that emphasise higher level thinking skills and involve active engagement by most students.
6. Develop student effective engagement, by the use of cooperative learning strategies, collaboration and student-centered approaches to learning.
7. Encourage the application of new learning, monitor individual student performance and provide feedback and scaffolding, to ensure that all students master the concepts being taught.
8. Teacher efficacy, or a belief that all students are capable of quality learning and that the individual teacher has the knowledge, the skills and the means in creating effecting learning environments in the classroom.

Slavin (2020), on the other hand, proposed his popular model of effective teaching, based on the following 4 core characteristics: quality of teaching, appropriate level of teaching, incentive and time:

1. *Quality of Instruction*: The degree to which information or skills are presented so that students can easily learn them. Quality of instruction is largely a product of the quality of the curriculum and of the lesson presentation itself.
2. *Appropriate Levels of Instruction*: The degree to which the teacher makes sure that students are ready to learn a new lesson (that is, they have the necessary skills and knowledge to learn it), but have not already learned the lesson. In other words, the level of instruction is appropriate when a lesson is neither too difficult nor too easy for students.

3. *Incentive*: The degree to which the teacher makes sure that students are motivated to work on instructional tasks and to learn the material being presented.
4. *Time*: The degree to which students are given enough time to learn the material being taught (Slavin, 2020).

Furthermore, Slavin (2020) also summarises good and effective pedagogy in term of the following four dimensions:

- Knowledge of subject and teaching resources
- Knowledge of students and their learning (these are related to self-knowledge and self-regulation)
- Critical thinking and problem-solving skills (reflection)
- Communication skills and decision making (Slavin, 2020).

By synthesising research findings dealing with effective teachers and quality schooling we can summarise the following 5 main factors contributing to quality teaching in schools:

- teacher's self-efficacy
- lesson structure
- awareness of cultural diversity
- positive motivational atmosphere
- teacher's mastery skills.

These are described below:

1. Effective teachers have a sense of *self-efficacy* (the belief and confidence that they can successfully influence the learning of students)
2. Structure their lessons as constructivist and student-based learning experiences (using advanced organisers, executive summaries, metacognition, etc)
3. Sensitive to cultural diversity and employ global/cross-cultural perspective
4. Maintaining positive classroom climate and positive expectations
5. Exhibit mastery of teaching skills, by demonstrating high level of knowledge, and skills, excellent communication, effective questioning and the use of effective motivational strategies.

Thus, effective teaching is likely to be shaped by the teacher's attitudes, beliefs, knowledge, skills and values. It includes teacher's mastery of content knowledge, organisation, clarity, teaching pace, classroom control and management, effective lesson planning, realistic and achievable objectives, the use of engaging questioning techniques, and above all, showing students how to learn best (see Fontana, 1995; Zajda, 2018a, b; Senior et al., 2018).

Motivation in the Classroom: Creating Effective Learning Environments

In addition to the student's self concept, and cultural identity, motivation is considered to be one of the most significant variables affecting students' learning and academic achievement globally. In explaining some factors affecting motivation, Bandura (1986) went on to define self-efficacy as the beliefs we have about ourselves that cause us to make choices, put forth effort, and persist in the face of difficulty. The OECD (2009a, b, c) report, *Creating effective teaching and learning environments*, analyses some of the key factors in developing motivational atmosphere and effective learning environments. These factors included classroom disciplinary climate, and teachers' self-efficacy. Educational research has demonstrated that classroom disciplinary climate is associated with student performance and that self-efficacy is an important measure of productivity and effectiveness. The OECD report included teachers' constructivist pedagogies, and both structured teaching practices and student-oriented teaching practices, as essential for establishing a motivational atmosphere and effective learning environments:

Teachers with 'constructivist' beliefs about teaching are more likely to report good classroom disciplinary climate in many countries, but those who emphasise the "direct transmission" of knowledge in instruction are more likely to teach classes with poorer disciplinary climate. Teachers who hold either of these types of beliefs strongly are more likely to report high self-efficacy. Structured teaching practices and student-oriented teaching practices are both associated with good classroom climate and teachers' self-efficacy in many countries. This is less true of other practices identified in the survey. (OECD, 2009a)

Many research findings confirm that student motivation is one of the key factors in all successful learning and achievement in schools (Entwistle, 1988; Marinak & Gambrell, 2010; Overton-Healy, 2008; Steinmayr et al., 2019; Souders, 2020). Overton-Healy (2008), argued that learning is a function of motivation, namely that for learning to occur 'motivation must be evident' and that the creation of a motivating atmosphere enhances the 'propensity for learning' (Overton-Healy, 2008, pp. 2–3). Steinmayr et al. (2019) argued that achievement motivation is not a single construct, and includes such variables as 'ability self-concepts, task values, goals, and achievement motives'.

The few existing studies that investigated diverse motivational constructs as predictors of school students' academic achievement above and beyond students' cognitive abilities and prior achievement showed that most motivational constructs predicted academic achievement beyond intelligence and that students' ability self-concepts and task values are more powerful in predicting their achievement than goals and achievement motives. (Steinmayr et al., 2019)

Steinmayr et al. (2019) concluded that students' ability self-concepts and task values are **the** most important motivational predictor of students' academic achievement:

Students' ability self-concept turned out to be the most important motivational predictor of students' grades above and beyond differences in their intelligence and prior grades, even when all predictors were assessed domain-specifically. (Steinmayr et al., 2019)

Research findings on motivation in the classroom, divide classroom motivation into two broad types: extrinsic motivation and intrinsic motivation. Extrinsic motivation is an environmentally created condition for students to initiate or persist in an activity in the classroom, deriving from an external reward, praise, awards, money, or pleasing the teacher. Whereas, intrinsic motivation is arising within the student's feelings of satisfaction or accomplishment, pleasure, and joy. It is also the natural tendency to engage one's personal interests and demonstrate one's capabilities.

Woolfolk and Margetts (2019) argue that academic achievement is determined not only by one's intelligence and skill but also by 'how motivated one is to achieve the outcome' (p. 348). Woolfolk and Margetts (2019) also draw on Russell et al. (2005) to explain how students' engagement in the classroom can be broken down into three interdependent forms: behavioural, emotional and cognitive engagements (see also Ainley, 2012). Overall, motivational theories highlight the positive impact of motivation on students' achievement, self-confidence and independence as learners. They remind teachers to recognise the range of student needs, cultural diversity, and students' physical and personal well-being, as well as students' perception of the links between effort and success. It could be argued, as Purkey (1970) did, that the six factors for creating a positive motivational atmosphere are: (1) challenge; (2) freedom; (3) respect; (4) warmth; (5) control; and (6) success (Purkey, 1970).

Finally, to motivate a learner to achieve in the classroom, one needs to think of the learner's self-concept, self-esteem, self-efficacy, cultural background, cognitive development, emotional maturity, and internal needs, desires, and rewards. Performing students need to set for themselves personally challenging goals, by means of self-regulated strategies, and focus more on the task itself rather than the grade. The amount of time spent on engagement in the classroom, and the quality of students' engagement affects their learning and academic achievement (Whelan, 2019). It is essential to engage, empower, motivate and educate students so they can adapt, and improve in academic achievement, and become lifelong learners. Therefore, motivated students should strive to become independent learners, and take responsibility of their own learning to reach their full potential.

Quality in Education

One of the effects of forces of globalisation is that educational organisations, having modelled their goals and strategies on the entrepreneurial business model, are compelled to embrace the *corporate ethos* of the *efficiency*, *accountability* and *profit-driven managerialism*. Hence, the politics of education reforms in the twenty-first century reflect this new emerging paradigm of standards-driven and outcomes-defined policy change (Zajda, 2014). This focus on standards-driven reforms was

already taking place in the USA during the 1980s. The report *A Nation at Risk: the Imperatives of Education Reform* (1983) and Bloom's (1987) *The Closing of the American Mind* prompted the USA to launch a series of education reforms to improve quality and excellence in schools. The result was a greater use of standardised test scores and raising academic standards. Recent education policy research also reflects a rapidly changing world. This is largely due to powerful forces of globalisation, global competitiveness, the media, and the spectacular growth of knowledge, generated by information communication technologies (ITCs). Education policy research reflects this, as evidenced by a global reliance on OECD generated indicators of academic achievement, defined by test results and examinations (OECD, 2013; Weisenthal, 2013; PISA, 2012). Research indicates that cultural capital, as a significant dimension of educational inequality, continues to shape and influence students' academic achievement and destinies globally (Sullivan, 2002; Saha, 2005; Zajda, 2014, 2021). Cultural capital, as coined by Bourdieu (1986), defines dominant conceptions of what constitute knowledge, knowing, and social value (see Bourdieu & Passeron, 1977, for the origins of the term cultural capital).

In their quest for excellence, quality and accountability in education, both locally and globally, governments increasingly turn to global models of academic performance, and comparative education data analysis. The use of the World Bank and OECD empirical data in international comparisons of educational outcomes, demonstrates the perceived need for such comparisons. The OECD, in co-operation with UNESCO, is also using World Education Indicators (WEI) program, covering a broad range of comparative indicators in academic achievements. This trend demonstrates the power of standards-driven and outcomes-defined culture affecting educational systems globally.

Conclusion

The above chapter has examined major educational, cultural and social factors defining and influencing effective learning environments globally. It focused on the student's self-concept, cultural identity and academic achievement, the significance of cultural and social capital in student's academic achievement, motivational strategies, effective teaching, and quality in education. It is argued that the most significant factors affecting all aspects of quality learning in schools globally begin necessarily with the student's cultural identity, self-concept, self-esteem, and active engagement. To these concepts, we can add students' academic identity, the role of cultural and social capitals affecting students, and their academic achievement in schools, as well as effective, inspirational and engaging teachers, who make all the difference in motivating their students to do better.

Chapter 2

Motivation in the Classroom: Creating Effective Learning Environments



Motivation in the Classroom: Creating Effective Learning Environments: Introduction

There are numerous education studies globally, demonstrating the nexus between motivation and academic achievement (Weiner, 1984; Bandura, 1986; Russell et al., 2005; Meece et al., 2006; Overton-Healy, 2008; Daniels, 2010; Saeed & Zyngier, 2012; Liu & Hou, 2017; Wentzel, 2017; Zajda, 2018a; Tokan & Imakulata, 2019; Alhadabi & Karpinski, 2019). Recently, in their longitudinal study Liu and Hou (2017) demonstrated that that academic achievement motivation was significantly related to academic performance. Similarly, Alhadabi and Karpinski, (2019) demonstrated the nexus between self-efficacy, the positive relationships between mastery approach goals, and academic performance.

Yet, one of the most prominent teaching and learning problem today in schools globally is a lack of motivation among some students towards academic activities and performance (Legault et al., 2006; Daniels, 2010; Ford & Roby, 2014; Kelly, 2017; Zajda, 2021). For a number of reasons, be they cognitive, social and emotional, there are some students in schools around the world who have no desire or drive to complete different learning tasks that are required of them. Legault et al. (2006), in particular, noted this lack of motivation among high school students:

One of the most prominent academic problems plaguing today's teenage youth is a lack of motivation toward academic activities. Year after year, for reasons yet to be understood, numerous high school students find themselves in a state in which they do not have the desire to carry out the academic tasks required of them...Indubitably, the absence of academic motivation can lead to feelings of frustration and discontentment and can encumber productivity and well-being. (Legault et al., 2006, p. 567)

Lack of motivation is a real and pressing problem in schools globally. Ford and Roby (2014) stated that many high school students find themselves lacking the desire to do academic task, because they feel that they 'do not belong':

They often times feel detached from their actions that cause them to lack motivation to complete their task. Many are bored in the classroom because they feel perhaps feel they "don't belong" ...Moreover, they are lacking in academic background knowledge, they seem to get further and further behind and each year in high school brings another year of additional pressure, feeling they will never get "caught-up." (Ford & Roby, 2014, p. 111)

Students' engagement in the classroom is a 'strong predictor of overall student achievement' (Whelan, 2019). The more time students spend engaged in the classroom, the more they learn, and this will affect their identity, self-concept, self-esteem, and academic achievement.

Some studies have demonstrated that over 40% of high school students were chronically disengaged from school (Grotty, 2013). Saeed and Zyngier (2012) confirmed research findings that 'disengaged students may do their work, but without interest and commitment, whereas, engaged students work hard and attempt to master their learning achieving the highest academic results' they can obtain (Saeed & Zyngier, 2012, p. 262). Bandura (1986), on the other hand, using his social learning theory and his self-efficacy construct, proposed that motivation (or a lack thereof) is the result of an individual's self-efficacy related to a task. Bandura defined self-efficacy as the beliefs we have about ourselves that cause us to make choices, put forth effort, and persist in the face of difficulty.

Previous PISA results have consistently shown that there is a positive association between students' perceptions of the classroom disciplinary climate and students' academic performance, even after accounting for socio-economic status (OECD, 2016). According to Benavot (2013), the PISA assessment of academic achievement has risen to strategic prominence in the international education policy discourse.

A positive disciplinary climate may also have benefits for other student outcomes, such as students' sense of belonging at school (OECD, 2017). Already in the OECD (2009a, b, c) report, *Creating effective teaching and learning environments*, some of the key factors in developing motivational atmosphere and effective learning environments were analysed. These factors included classroom disciplinary climate and teachers' self-efficacy. Research has demonstrated that classroom disciplinary climate is associated with student performance and that self-efficacy is an important measure of productivity and effectiveness (Ma & Willms, 2004; Sortkær & Reimer, 2016; OECD, 2009a, 2019a, b, c). The 2009 OECD report included teachers' constructivist pedagogies, and both structured teaching practices and student-oriented teaching practices, as essential for establishing a motivational atmosphere and effective learning environments (OECD, 2009a).

Ford and Roby (2014) argued that the teacher's attitudes, behaviour and teaching styles affected students' level of motivation:

Teachers have a tremendous effect on motivating their students. The teacher's behavior and teaching style, the structure of the course, nature of the assignment, and informal interactions with student s all have a definite effect on students' motivation. (Ford & Roby, 2014, p. 112)

Research findings confirm that student motivation is one of the key factor in all successful learning and achievement in schools (Marinak & Gambrell, 2010; Zajda, 2018a; Souders, 2020). Overton-Healy (2008), argued that learning is a function of motivation, namely that for learning to occur 'motivation must be evident' and that creation of a 'motivating atmosphere enhances the propensity for learning' was necessary (Overton-Healy, 2008, pp. 2–3). For this reason, understanding student

motivation and developing strategies to cultivate motivation and motivational atmosphere for all students at all levels of performance are essential to effective teaching (Ellsworth, 2009; OECD, 2009a, b, c; Brophy, 2010; Daniels, 2011; McInerney & McInerney, 2018; Rashid & Rana, 2019). Consequently, teachers have the opportunity everyday to make a positive difference in the lives of children (Rief & Heimburge, 2006). The way, in which teachers interact with their students, the motivational environment they create, learning activities they use, and motivational strategies they employ to teach greatly affect how motivated and successful their students will be. Motivation in education can have numerous positive effects on how students learn. It also impacts on students' identity, self-esteem, attitudes, values and behaviour towards selected disciplines (Ellsworth, 2009; Zajda, 2018a, b, c, d).

It has been argued that motivating students is not an easy task (Arends & Kilcher, 2010; Zajda, 2018a, b, c, d). One of the immense challenges for teachers in the global culture is to make available an environment and atmosphere in the classroom that can arouse, inspire and enhance a student's need and desire to learn (Theobald, 2006; Rashid & Rana, 2019; Zajda, 2021). This task is particularly complex because of the many social, cultural, cognitive, and emotional variables that affect a student's attitude and motivation towards learning in the classroom.

Definition of Motivation

Various definitions of motivation, obtained from a variety of educational psychology textbooks, seem to reflect the consensus that motivation is an internal process, state or condition, sometimes described as a need, desire, or want, that serves to activate or energize behaviour and gives it direction. Slavin (2020), has defined motivation as 'an internal process that activates guides and maintains behaviour over time'. Motivation is 'what gets you going, keeps you going, and determines where you're trying to go' (Slavin, 2020). Woolfolk and Margetts (2019) define motivation as 'an internal state that arouses, directs, and sustains behaviour' (p. 347). In general, motivation is used to 'explain the increase or decrease in the frequency and/or intensity of an individual's goal-seeking behaviour' (Svinicki & Vogler, 2012). Some of the key concepts in motivation include: traits, or an enduring characteristic, states, or a temporary condition, or feelings, anxiety, or feelings of tension, uneasiness, apprehension, and arousal, or alertness and attentiveness (Duchesne & McCaughey, 2020).

Furthermore, motivation can vary in both intensity and direction. For example, one student may be strongly motivated to play cricket, but not motivated to learn mathematics. Another student may be strongly motivated to learn to play violin rather than play football. Motivation can be linked to personality dimensions, such as 'extroverts', 'introverts' and 'neurotics' (Eysenck & Eysenck, 1969; Eysenck & Wilson, 1976).

Research findings on motivation in the classroom, divide classroom motivation into two broad types: extrinsic motivation and intrinsic motivation. Extrinsic

motivation is an environmentally created condition for students to initiate or persist in an activity in the classroom, deriving from an external reward, praise, awards, money, or pleasing the teacher. Whereas, intrinsic motivation is arising within the student's feelings of satisfaction or accomplishment, pleasure, and joy. It is also the natural tendency to engage one's personal interests and demonstrate one's skills, capabilities and achievement.

Students with intrinsic motivation tend to complete various tasks, because they see value and pleasure in the experience itself, rather than completing a task with the expectation of gaining external rewards. It is important therefore that students learn this and are encouraged to seek motivation from within themselves. To promote intrinsic motivation in the classroom it is important to set tasks that are mastery goal- orientated. Characteristics of these tasks that should be included when planning a unit of work consist of variety, diversity, challenge, personal control and meaningfulness.

Woolfolk and Margetts (2019), in theorising motivation, explain that motivational psychologists have focused on the following five questions:

1. What choices do people make about their behaviour?
 2. How long does it take to get started?
 3. What is the intensity or level of involvement in the chosen activity?
 4. What causes a person to persist or to give up?
 5. What is the individual thinking and feeling while engaged in the activity?
- (Woolfolk & Margetts, 2019).

These questions are necessary to get started in creating motivational atmosphere and engagement in the classroom. However, we need to add such constructs as the self, self-esteem and self-efficacy, as well, as these are central to understanding the student's identity, motivation and motivational atmosphere in the classroom. Academic achievement is determined not only by one's intelligence and skill, but also by 'how motivated one is to achieve the outcome' (Woolfolk & Margetts, 2019).

Contemporary Views of Motivation in the Classroom

There are numerous theories of motivation. Drawing on some popular educational psychology textbooks, which I have used successfully with my Master of Teaching students over the years, I would like to focus on the four major theories of classroom motivation, namely behavioural, cognitive, socio-cultural and humanistic, and discuss their classroom applications (Woolfolk & Margetts, 2019; Duchesne & McCaughey, 2020).

Behavioural Theories of Motivation

Behaviourism or the behavioural learning theory is a concept that focuses on how students behave, how their behaviour can be changed, and how they learn. Behaviourism focuses on the idea that all behaviours are learned through interaction with the environment. Behaviourists claim that only *observable* behaviour can be measured objectively. A typical example of behaviourism, especially in behaviour modification approach, is the use of rewards, or **positive or negative reinforcement**. A student is rewarded with a token, for example a gold star, which I use frequently in my M. Teach seminars, if the task is completed correctly. Such a student is likely to work harder on another task to receive the reward. The concept of motivation plays a significant part in behavioural learning theory, which maintains that behaviours that have been reinforced are likely to be repeated (Ryan & Deci, 2000; Slavin, 2020). Behavioural explanations of motivation are essentially based on the belief that behaviour is determined by reinforcement contingencies. If the cues that elicit specific behaviour can be identified, then appropriate reinforcement can be applied to encourage or discourage that behaviour, by the use of extrinsic rewards. In this approach, immediate rewards and reinforcement are important factors in the operant conditioning, or behavioural model of motivation.

In behavioural learning theory of motivation, I would like to focus on the two key concepts: operant conditioning and applied behaviour analysis (ABA). Operant conditioning was explored at length by Edward Thorndike and B. F. Skinner. The learning process in operant conditioning indicates that we learn, as we operate on the environment. Operant conditioning refers to learning, in which voluntary behaviour is strengthened or weakened by consequences, in this case the use of rewards, as positive reinforcers. Thus, reinforced behaviour results in increase in frequency of desirable behaviour.

Operant learning focuses on changes in an individual's observable behaviours. In *operant conditioning*, behaviour is impacted by new or continued *consequences*, and the application of *reinforcers* provides incentives to increase behaviour. The application of punishers provides disincentives that result in a decrease in behaviour. In short, incentives, rewards and reinforcement are crucial to the success of behavioural approaches to motivation. Furthermore, it is essential that *immediate* rewards and reinforcement are applied in the operant conditioning (behaviourism) model of motivation for the model to work:

When you are working with very young children, continuous reinforcement is useful, particularly in the early stages of teaching a new skill. The problem with continuous reinforcement is satiation, when the reinforcer being used loses its appeal as a motivator. For this reason, alternative schedules, or different reinforcers, need to be used in order to maintain the momentum of learning. (Duchesne & McCaughey, 2020, p. 237)

This model is completely dependent on the use of rewards, as positive, or negative reinforcers. Without such rewards the model would not work (Skinner, 1953; Bandura, 1986; Beck 2004). Fontana (1995) believed that the level of motivation

may suffer if children must wait 'too long for the results of their work' (Fontana, 1995, p. 151).

According to behaviourist view, motivation is simply the product of effective contingent reinforcement. Consequently, behaviourist psychologists emphasise the use of extrinsic reinforcement to stimulate student's task engagement (Krause et al., 2018). For example, when children are rewarded with praise and a gold star for doing their math sums correctly they will look forward to their next mathematics lesson, as they anticipate further rewards. Behavioural theorists argue that explanations for motivation don't have to include thoughts and feelings, since students are motivated purely by external events (Schunk et al., 2015). These external events direct behaviour and place an importance on positive and negative reinforcers to get individuals to behave in a desired way (Arends & Kilcher, 2010).

Positive reinforcers, in the form of rewards, are intended to get individuals repeat preferred behaviours, while negative reinforcers are used to influence individuals to avoid particular behaviours (Arends & Kilcher, 2010). Almost all teachers use extrinsic reinforcement in some way to motivate their students, but they may not realize that they are not always use reinforcement correctly, or effectively (Akin-Little et al., 2004). Akin-Little et al. (2004) reported on their results from important meta-analytic studies, and concluded that little detrimental effect was found with the use of external reinforcement. By reinforcing academic achievement it ensures that the correct, desired behaviour continues. This, in turn, will motivate students to want to be engaged and to learn more. The use of extrinsic reinforcement may be the most significant reason to enhance engagement and performance in the classroom. However, it may encourage surface, rather than deep or generic learning, as students expect to be rewarded for their work (Zajda, 2018a, b, c, d). Some general concerns that have been raised about the use of 'reinforcement, punishment and token economies'. The main issue relates to the idea that the use of tokens and reinforcement weakens the 'intrinsic desire of the child to learn, and increases dependency on an outside agent to foster learning' (Duchesne & McCaughey, 2020, p. 241).

In order to change student's attitudes and behaviour in the classroom, applied behaviour analysis (ABA) is also employed. ABA framework, or behaviour modification, is the application of behaviourism and behavioural learning principles to identify, and change behaviour, as needed. In this approach, in order to promote desirable behaviour, teachers use reinforcers and apply the intervention, such as praise, shaping etc. When teaching a 'new behaviour involving actions that are unfamiliar to a student', the techniques known as 'shaping', 'chaining', 'cueing', 'prompting', 'modelling' and 'task analysis' are tools for helping the student learn (Duchesne & McCaughey, 2020, p. 242).

B.F. Skinner, who used his operant conditioning to reinforce desirable behaviour, is regarded as the 'father' of applied behaviour analysis. In the classroom setting, by means of applied behaviour analysis technique, the student, with practice, is likely to cultivate and maintain desirable behaviours.

Cognitive Theories of Motivation

Cognitive theories of motivation were developed as an alternative to dominant behavioural theories of motivation, which were very influential in teaching during the 1950s and the 1960s. Unlike behavioural theories of motivation, cognitive theories of motivation focus on the mind, internal mental processes and their role in learning. The key idea of cognitive theories of learning, which is attributed to Piaget (1977), is that knowledge is ‘constructed by the learner and is informed and influenced by the learner’s previous experiences’ (O’Donnell, 2012, p. 61). Cognitive theories are based on the belief that thought processes control behaviour. Consequently, cognitive theories explain in detail, the way people process information, interpret meanings in particular situations and store information. By focusing on the categories and labels people use, in processing and storing information, in working memory and long-term memory, we can identify thoughts, emotions, dispositions, and behaviours (Meyer & Turner, 2002). Meyer and Turner (2002) called for a new theoretical synthesis that integrates ‘emotion, motivation, and cognition as equal components in the social process of learning’ (Meyer & Turner, 2002, p. 107). Their research findings suggested that there was a far greater interaction between the learner, emotions, motivation and knowledge acquisition:

...the person and the context, such as cognition, motivation, and emotion, each could be viewed as contributing to the development of the other. Thus, they interact as one system, not as two. (Meyer & Turner, 2002, p. 107)

Neville (2013) also argued that since ‘cognition and emotion are fully integrated’ teachers need to pay more attention to the role emotions play in classroom life (Neville, 2013, p. 22).

Several of the most well researched and discussed theories of motivation have come from cognitive explanations of motivation that view the child as an innately active learner. These particular theories of motivation attempted to demonstrate the link between cognitive processes and academic achievement in schools (Bandura, 1986; Liu & Hou, 2017; Tokan & Imakulata, 2019). Cognitive processes have been extensively examined as sources of motivation or lack of motivation in schooling and some of these theories are explored below. There are at least **four** major types of cognitive theories of motivation: achievement motivation, self-worth theory of motivation, attribution and goal theories.

Achievement Motivation

The need for achievement or achievement motivation has been described as a ‘relatively stable personality disposition’ that drives some individuals to strive for success (McClelland, 1988). Earlier, Atkinson (1957) described achievement motivation as a learner’s tendency to approach success or avoid failure in the learning task. If there is a significant risk of failure in a task these students will not attempt it, but they may enjoy performing tasks otherwise. These students also usually focus on

mastery or learning goals and are motivated to learn more and perform better. However, students who feel they need to avoid failure, in order to protect the 'ego' or the 'self', rather than having a need for success, are likely to select easy tasks, which will have a great deal of success, rather than failure. What teachers need to be aware of is that students can either be motivated by a strive for success or fear of failure, and that the choice students make will depend on which of these factors is strongest, because of their past experiences of success or failure (Christensen, 2001). It can lead to avoidance of challenging tasks through fear of failure, or can result in unhealthy competition among high need achievers (achieving motivation syndrome).

Consequently, teachers need to have a better knowledge and understanding as to why students behave in so many different ways, when learning to perform certain tasks and to help students to see that their mastery of a certain topic/concept is far more important than simply achieving the result on a particular test. Teachers also need to be aware of their own biases and how these might affect students, as well as accepting the significance of regular feedback on students' work, as a key motivating factor on their performance, (Zajda, 2011, 2018a, b, c, d; Hamidun et al., 2013).

The Self Worth Theory of Motivation

The self worth theory of motivation originated and was later adapted from achievement motivation perspective. The self worth theory of motivation was used to account for the role of self worth in explaining students' need to avoid failure and hence protect their self-concept and self-esteem. Applications of the self worth theory to motivation in the classroom require teachers to help students attribute their success and failures to internal causes, namely ability and effort, rather than external causes, such as luck and difficulty, as sometimes is the case (Arends & Kilcher, 2010). Teachers also need to recognise that motivating students to focus on increasing mastery skills, rather than performance goals, is more effective in developing high order learning and thinking skills. They also need to be aware of the need to provide accurate and credible feedback and be aware of their own biases and ways in which it could affect the way they attribute success and failure in individual students.

Attribution Theory of Motivation

This cognitive explanation of motivation focuses on the assumption that students try to understand their success and failure that influence their motivation and behavior. Bernard Weiner (1986, 2000), a prominent educational psychologist, was one of the main researchers to use his theory to explain the causes for success or failures. Weiner argued in his book that recent investigations have yielded insights concerning the nexus between emotions and motivation (Weiner, 1986). As a result, Weiner attempted to create an attributional theory of motivation that would explain the

specific linkages between the structure of attributional thinking and qualitatively distinct emotional reactions, and to explain and specify the ‘relationships among cognition, emotion, and action’ (Weiner, 1986). He used the three factors below to explain his theory:

- Locus of control; attributing success or failure to: internal (controllable) factors external (uncontrollable) factors
- Stability: whether the cause stays the same or can change
- Control: whether the learner can control the cause (see Woolfolk & Margetts, 2019).

Weiner believed that these three factors played an important role in motivation, as they affected expectancy and value. In general, internal and external factors in motivation are closely related to feelings of self-esteem. If success is attributed to internal factors, it will lead to pride, achievement, a greater feeling of control and increased motivation (Ames, 1992a; Weiner, 2000). Later, Weiner (2000) also examined attribution theories of motivation, in terms of an ‘intrapersonal theory’, which included ‘self-directed thoughts’, or particularly expectancy of success and ‘self-directed emotions’, such as pride, guilt, and shame (Weiner, 2000).

Ames (1992b), with reference to attributions factors affecting achievement, described a systematic intervention program, which aimed at fostering a mastery-goal orientation. It included six features of the classroom to stress a mastery-goal orientation:

- task design
- distribution of authority
- rewards
- grouping
- evaluation
- time allocation.

Research findings from Ames’s long-term project, demonstrated that the mastery climate of classrooms was increased when teachers implemented these features in the classroom.

Goal Theories of Motivation

The goal orientation theory of motivations focuses on mastery learning, and performance. Mastery goal theory of motivation deals with achieving mastery of a task or skill. Performance goals focus on performing well in a chosen area of achievement. When students want to read a book, play a piano, complete their homework, or study for a test, they are displaying ‘goal-directed behaviour’ (Woolfolk & Margetts, 2019). Performance-approach goals represent individuals motivated to outperform others and demonstrate their superiority. Studies report that mastery-approach goals are associated with positive achievement outcomes, such as high levels of effort, interest in the task, and use of deep learning strategies (Senko & Harackiewicz,

2005; Alhadabi & Karpinski, 2019). Overall, goal success is influenced by the goal orientation, in which mastery-approach goals tend to be most likely to be successful. Alhadabi and Karpinski (2019) demonstrated that ‘grit’ or perseverance of effort and consistency of interest positively associated with academic performance, by means of self-efficacy and achievement orientation goals. Their findings supported the ‘positive relationships between mastery, approach goals, and academic performance’ (Alhadabi & Karpinski, 2019). Their model revealed that self-efficacy may play supportive and protective roles by increasing the positive effect of mastery and performance-approach goals.

With reference to goal theories of motivation, I would like to add the following three guiding principles of constructivist learning, namely:

- Learners are *active participants* in their learning, and learning by doing, or experiential learning is central to constructivist leaning in practice (Howe & Berv, 2000)
- Learners are *self-regulated* and they construct and monitor their learning, where meta-cognition plays an important role in meaningful learning.
- *Social interactions* is essential for meaningful learning (Zajda, 2018a, b, c, d).

With reference to goal theories of motivation and achievement, it is important to add the concept of self-regulated learning (SRL), used by students to improve their performance in the classroom. SRL includes the cognitive, metacognitive, behavioral, motivational, socio-cultural, and emotional dimensions of learning. The causal relationship between self-regulated learning (SRL) and academic achievement is relevant to all theories of motivation. The SRL concept explains and clarifies how learners construct and rationalise their academic achievement goals, and accept responsibility for ‘monitoring cognition, motivation and behaviour to realise their capabilities’ (Peel, 2019, p. 23).

Socio-Cultural Theory of Motivation

Socio-cultural theory of motivation, in contrast to behaviours and cognitive theories of motivation, emphasises active engagement and participation in the classroom. Students engage in activities and social interaction to develop their language skills, and consolidate their cultural identities. Lev Vygotsky believed that social interaction played a major role in the development of language and cognition (Vygotsky, 1978). Vygotsky’s socio-cultural theory stressed that both social and cognitive aspects of human development reflected a socially mediated process, in which children acquired their values, beliefs, and problem-solving strategies through collaborative dialogues, in this case working in cooperative group settings in the classroom, and being defined and influenced by social constructivist pedagogy (Zajda, 2018b).

In the socio-cultural theory, students are motivated to learn if ‘they are members of a classroom or school that values learning’ (Woolfolk & Margetts, 2019). Students tend to observe other students and learn from their role models.

Socio-cultural theory of motivation is also related to social cognitive theory, used in psychology, and education, which maintains that some parts of an individual's knowledge acquisition can be directly related to observing others within the context of social interactions, experiences, and outside media influences. Social cognition theory proposes reciprocal determination as a primary factor in both learning and motivation. In this view, the environment, an individual's behaviour, and the individual's characteristics (e.g., knowledge, emotions, and cognitive development) both influence and are influenced by each other two components. Bandura (1986, 1996) highlights *self-efficacy* (the belief that a particular action is possible and that the individual can accomplish it) and *self-regulation* (the establishment of goals, the development of a plan to attain those goals, the commitment to implement that plan, the actual implementation of the plan, and subsequent actions of reflection and modification or redirection). Below is the concept map of social cognition and motivation:

Social learning theory also suggests that *modelling*, based on imitating significant others, and *vicarious learning*, or watching others have consequences applied to their behaviour, are important motivators of students' behaviour. Social learning theorists such as Bandura (1977) questioned the behaviourist emphasis on extrinsic sources of motivation and instead saw motivation as a goal directed behaviour which is closely associated to feelings of personal effectiveness or self efficacy. Beliefs about our ability to reach a goal determine the amount of effort we will expend and for how long we will persist. The nature of the goal also influences our behaviour, and goals that are specific and moderately difficult and attainable in the not too distant future are most likely to stimulate effort and lead to increased efficacy expectations.

Social learning theory is now commonly defined as social cognitive theory which emphasises learning through observation of significant others. This theory suggests that modelling (learning as a result of observing others) and vicarious reinforcement (observing others have reinforcing consequences applied to their behaviour) are both major motivators of behaviour. Furthermore, social cognitive theory proposes that reciprocal determination is a significant element in both learning and teaching and is influenced and shaped by the three key factors: environment, behaviour and personal/cognitive behaviours (Santrock, 2008). Moreover, a model of self regulation has evolved from Bandura's social cognitive theory. It occurs when students take responsibility for their own learning outcomes and are include the students' self generated thoughts, feelings and actions for accomplishing desirable academic achievement goals.

Albert Bandura's (1989) social cognitive theory (SCT) emphasized how cognitive, behavioral, personal, and environmental factors interact together to determine and influence levels of motivation and behavior (Crothers et al., 2008). Furthermore, according to Bandura (2005), human functioning is the result of the interaction among all three of these factors. also explained that social cognitive theory (SCT) demonstrates that individuals do not simply respond to environmental influences, but rather they actively seek and interpret information. Bandura argued that individuals 'function as contributors to their own motivation, behaviour, and

development within a network of reciprocally interacting influences’ (Bandura, 1999, p. 169). SCT continues to emphasize that learning occurs in a social context and that much of what is learned is gained through observation. According to Bandura (2005), ‘people are self organizing, proactive, self-regulating, and self reflecting. They are contributors to their life circumstances not just products of them’ (Bandura, 2005, p. 1).

Humanistic Theories of Motivation

The most well-known theory of motivation is Maslow’s humanistic needs hierarchy theory. Humanism is a philosophy is a pedagogical approach that believes learning is viewed as a personal act to fulfil one’s potential. Maslow (1962), believed that there were five categories of human needs, which affected an individual’s behaviour: physiological needs, safety needs, love and belonging needs, esteem needs, and self-actualization needs. Humanistic psychology was developed in the 1950s, as a reaction against two dominant, over-scientific and de-humanizing psychological theories, namely behaviourism and Freudian psychoanalysis (Elkins, 2009). The aim of humanistic theory was education of the whole person – cognition, feeling and social interaction (Hein, 1975). In addition to Maslow, Carl Rogers (1961) was one of the most influential humanistic psychologists in American history, due to his contribution in many fields: education, psychology, counselling psychology, conflict resolution, and peace. Like Maslow, Rogers also believed that within nurturing environments, learners are free to learn, explore and reach their full potential. He believed that accepting and supporting the student, altering the self-concept, positive attitudes, and self directed behavior to achieve, and he coined the concept of ‘unconditional positive regard’ (Rogers, 1961). Unconditional positive regard is when a person (parents, and significant others) accepts and loves the person for what he or she is. Positive regard is ‘not withdrawn if the person does something wrong or makes a mistake’ (McLeod, 2014).

Humanistic psychologists believed that it is necessary to study the person as a whole, especially as an individual grows and develops over the lifespan. It follows that the study of the self, social learning theory, social constructivism, motivation, and cooperative group learning are areas of particular interest in humanistic psychology. A humanist approach in the classroom will have a strong focus on students’ emotional wellbeing, feelings, and potential to achieve knowledge at the highest level self-actualization. A humanist teaching strategy will have at least three constructs used in teaching:

1. Free will: Learners have free choice to do and think what we want;
2. Emotions impact on learning: Learners need to be in a positive emotional state to achieve their best;
3. Intrinsic motivation: Learners generally have an internal desire to achieve their best.

Humanistic theories of motivations are needs-based views of motivation, namely satisfying the learner's needs. The same person may have different needs at different times. The humanist theory of motivation is fascinating since it is not only associated with achievement education but also has connotations for students' welfare and wellbeing through its interest with basic needs. Maslow (1954) perceived motivation as a hierarchy of needs. According to Maslow's model needs drive behaviour and only when basic lower level needs have been satisfied will individuals be motivated to satisfy higher level or growth needs (Christensen, 2001). Individuals attach different levels of importance to each of these different needs and can also have different needs at different times (Slavin, 2020).

Humanist theories of motivation are concerned with general personal development, the actualisation of potential and the removal of obstacles to personal growth. Applications of humanist approaches to motivation in classroom surroundings require teachers to be conscious of students' needs both within the classroom and students' external environment, have positive expectations for each student, be conscious that students are more concerned over other needs rather than the demands of the school curriculum and that students with low self esteem are not motivated to make every effort for higher levels of achievement. Hungry, tired students will not have the energy to become involved in class activities. Pupils who are frightened or worried will not be able to develop the confidence to participate or be creative. Homeless, traumatised or abused children also face difficulties because the need for basic needs interferes with higher needs.

Furthermore, it is important for teachers to teach in a way which helps students to satisfy their needs such as self determination, and to experience the need for achievement and affiliation (Arends & Kilcher, 2010). Teachers also need to be aware that this approach positively identifies hierarchy of human needs, which influence behaviour, and which schools need to address, in order to satisfy students' basic needs, such as food and security (Arends & Kilcher, 2010). However, teachers also need to understand that humanistic pedagogy can be time consuming, as the approach relies on fulfilling individual students' needs and each student needs could be different. Hence, implementing humanistic pedagogy in the classroom is likely to take a good deal of time and patience (Christensen, 2001).

Humanistic psychologists also believed that we should pay more attention to emotions and ensure that our students are feeling safe, that they belong—in a positive, relaxed and comfortable environment. Humanistic psychologists argued that other dominant educational theories, like behaviourism, cognitive and socio-cultural perspectives tended to ignore the major role of emotions in learning and motivation.

Application of Motivational Approaches in the Classroom

Overall, motivational theories highlight the positive impact of motivation on students' achievement, self-confidence and independence as learners. Teachers need to recognise the range of student needs, individual differences, cultural diversity, and

students' physical and personal well-being, as well as students' perception of the links between effort and success.

Behavioural Approaches to Motivation

Applications of behavioural approaches to motivation in the classroom settings require teachers to use contingent rewards and punishment to reinforce student achievement so that desired behaviour is recurring, and to keep in mind that reinforcement to increase this behaviour motivates additional learning of this type and that student motivation is formed by prior reinforcing encounters. Teachers also need to understand that even though these approaches can have a positive impact on student motivation issues have been raised about the overuse and overall misuse of extrinsic rewards. To apply behavioural approaches to motivation in classroom settings, teachers need to:

- contingently reinforce students' achievements to ensure that desired behaviour is repeated
- remember that reinforcement to increase desired behaviour motivates further learning of this type
- recognise that student motivation is shaped by previous reinforcing experiences

Cognitive Approaches to Motivation

With reference to the use of cognitive view of motivation, teachers need to be aware of the following factors:

- Need to understand the underlying factors in students' behaviour, studying students carefully and using a variety of information sources to discover why students behave as they do;
- realise that motivating students by focusing on increasing mastery is more effective than emphasising performance goals;
- be aware of their own biases and how these might affect the way they attribute success and failure in individual students;
- recognise that constant feedback given to students is essential as it will have a significant impact on the ways students attribute their performance on a learning task.

Social Learning Approaches to Motivation

The social learning approach suggests that teachers need to

- ensure that learners experience success, not just failure;
- remember that self-evaluation is influenced by observing others' achievements, and by persuasion and high arousal in challenging situations;
- recognise that motivation is affected by learners' judgements about their own self-worth and efficacy.

Humanist Approaches to Motivation

To apply humanist ideas in classrooms, teachers need to:

- become more concerned with the wider implications of student welfare, not just with students' education
- be aware that some students are more concerned with feelings of safety; belonging and self-esteem than with the demands of the school curriculum
- recognise that students with low self-esteem will not be motivated to strive for higher levels of achievement.

The strengths of this approach are that it identifies hierarchy of human needs that influence behaviour. However, humanist approach to motivation in the classroom could be regarded as inefficient and time-consuming by teachers, who are influenced by the efficiency regime in schools. As the humanistic theory of motivation, or needs-based approach, focuses on maximizing the fulfilment of individual needs, it may be difficult to implement in the classroom, due to time-constraints. Furthermore, a concept like 'self-actualisation' is difficult to define in any culture.

Discussion

Some aspects of motivational theories, as analysed above, especially behavioural theory of motivation, may have a limited impact on learners. These include the use of extrinsic rewards in behavioural theories. Such rewards are likely to produce in students a surface, or superficial learning, rather than meaningful, deep and reflective learning. As Khillar, (2020) explains, surface learning is a 'passive approach to learning' where the students tend to learn only what is required for passing a test:

Surface learning, as the name suggests, is a rather passive approach to learning where the students tend to learn only what is required and nothing more. It is a superficial approach to learning which simply involves scraping the surface of the material being studied and concentrating only on the assessment requirements without getting into the details. The surface learners tend to work in isolation and see learning as coping with tasks, as opposed to deep learners who seek to understand meaning. The surface learners concentrate only on assessment requirements with the only intention of passing the exams or test. (Khillar, 2020)

The use of extrinsic rewards, rather than intrinsic rewards and a resultant fear of failure in some students may lead them to avoid performing difficult or challenging

tasks. To motivate a learner to achieve in the classroom, one needs to think of the learner's identity, self-esteem, self-efficacy, cultural background, cognitive development, emotional maturity, and internal needs, desires, and rewards.

There is no magic formula to motivate all students. Strategies to increase student motivation could be divided into two key areas. Firstly, helping students change their attitudes and perceptions and secondly modifying classrooms and teaching methods (Arends & Kilcher, 2010). Helping students change their attitudes and perceptions could involve: focusing on controllable and alterable factors, helping students alter their views about success and failure, using language to develop self-efficacy and agency and paying attention to students' goals and goal orientations. Modifying classroom and teaching methods could involve: using a balance of extrinsic and intrinsic rewards, designing lessons built on students interests and intrinsic values, creating safe classrooms, planning lessons to satisfy students needs, teaching to students' strengths, structuring learning experiences to improve learning, emphasising cooperative goals and reward structures and teaching with authenticity and passion (Arends & Kilcher, 2010).

Overall, we need to create a positive and engaging motivational atmosphere in our classrooms, where all students feel that they belong, that they are appreciated as human beings, that they work in a safe and inclusive environment, and where they want to achieve and participate in meaningful learning activities. The six factors for creating a positive motivational atmosphere are:

- challenge
- freedom
- respect
- warmth
- control
- success

Effective classroom strategies, addressing various dimensions of motivation, would need to include *competence*, *control/autonomy*, *interest/value*, and *relatedness* (Center on Education Policy, 2012, p. 6). Review of current research on aspects of student motivation and efforts to improve demonstrates several relevant cross-cutting themes:

Student motivation is not a fixed quality but is something that can be influenced in positive or negative ways by schools, parents, and communities and by individuals' own experiences.

Research offers lessons on how and why students are motivated and what types of policies and practices hold promise for improving motivation.

No single strategy will work to motivate all students. Motivation varies, not only among students but also within the same student depending on the task and context. Motivating students often requires a combination of strategies that address the specific reasons why a student has become disengaged from school. (Usher, 2012, p. 7)

Saeed and Zyngier (2012) research findings demonstrated that 'good teacher-student relationship; clear instructions; group work; giving choice, planning engaging and interesting learning activities; and making learning important and valuable to students' all result in promoting and enhancing student motivation and

engagement in their learning (Saeed & Zyngier, 2012, p. 262). Furthermore, as Meyer and Turner (2002), suggested earlier, major theories of human development, such as Bronfenbrenner's (1979) ecological theory and Vygotsky's (1978) socio-historical theory demonstrate the nexus between cognition, environment and emotions: 'Just as cognitions are constructed as part of social interactions, so too can motivations and emotions' (Meyer & Turner, 2002, p. 112).

The Spiral Model of Motivational Theories

Based on the above discussion of motivational theories, I would like to propose a new model, combining all four motivational theories: behavioural, cognitive, socio-cultural and humanist. I will use my spiral curriculum, as a concept map, and place all four motivational theories in it. At the centre of this dynamic and pulsating spiral will be behavioural motivation theory, followed by the other theories. Each level of the spiral will contain major motivational theories. The advantage of the motivation spiral curriculum model concept map is that it has all four motivational theories interacting, engaging and pulsating, affecting individuals in specific and different ways, according to their identities, the self-concept, cognitive, social and affective domains, needs, desires, academic achievement goals, and cultural capital. This model also suggests that motivational theories are epistemologically interlinked, intersecting behavioural, cognitive, socio-cultural and humanistic models of motivation, and go beyond traditional conceptual models of motivational theories, with clearly defined semantic borders. In other words, depending on a particular need and strategy, we can use relevant elements of the motivation spiral curriculum model and theories in classroom pedagogy.

Conclusion

There exists a consensus in education research globally, that teachers, in terms of their attitudes, beliefs, values, knowledge, skills and self-efficacy have a powerful influence on motivating their students to learn and perform better. Whatever the source of motivation affecting students to perform in the classroom, whether intrinsic or extrinsic motivation, as a teacher it is immensely important to influence and motivate students to learn better and to improve academic achievement, so they eventually become intrinsically, rather than extrinsically motivated. As demonstrated earlier, no single strategy will motivate all students. This is due to variations of levels and intensity of motivation, not only among students, but also within the same student, depending on the task and context. Performing students tend to set for themselves personally challenging goals. However, they also need to focus more on the task itself, rather than the outcome, or the result. It is essential to engage, empower, motivate and inspire students so they can adapt and improve in academic

achievement, and become lifelong learners. Furthermore, classroom strategies to improve motivation and academic achievement should be implemented carefully and thoughtfully, addressing individual and cultural differences and learning styles. In order to enhance their academic achievement, motivated students should aim to become independent learners, using self-regulated learning strategies and taking responsibility for their own learning. Finally, to motivate students to learn and to achieve desirable performance standards in the classroom, one needs to be aware of many factors influencing students' desire to learn. These include a mixture of behavioural, cognitive, affective and social development factors, as well as the student's identity and personality, cultural background, emotional maturity, internal needs, aspirations, and academic achievement goals.

Chapter 3

Constructivist Learning Theory and Creating Effective Learning Environments



Constructivism in Learning

Compared with traditional methods of teaching, constructivist pedagogy, due to its significant role in creating effective and engaging learning environment in schools, has become an increasingly popular and preferred pedagogy. One of the most obvious reasons for its popularity is that it offers to students much more social and cognitive interaction and engagement in collaborative and cooperative groups. Based on prolific research findings dealing with the nexus between constructivist pedagogy, quality teaching, and improvement in academic performance, I would like to suggest that effective learning environments need to offer continuous active engagement in schools globally. Constructivist pedagogy, based on psychological and social constructivism can become one of the effective classroom strategies for improving students' engagement and academic achievement (Richardson, 2003; Puacharearn, 2004; Kim, 2005; OECD, 2009a, b, c; Sharma & Sharma, 2012; Ayaz & Şekerci, 2015; Adak, 2017; Alt, 2017; Gupta & Tyagi, 2017; Zajda, 2018b). There exists a causal relationship between constructivist pedagogy and students' academic achievement. In one particular comparative and cross-cultural meta-analysis, Ayaz and Şekerci (2015) examined some 53 studies analysing the effects of constructivist pedagogy on students' academic achievement and concluded that 'the constructivist learning approach, compared to traditional teaching methods, has positive effects on the student's academic achievement' (Ayaz & Şekerci, 2015, p. 151). Similarly, Adak, (2017) demonstrated that the students exposed to the constructivist pedagogy 'performed significantly higher than those exposed to the traditional teaching method in respect of their gained scores at every intelligence levels', and that the constructivist approach strategy is capable of improving 'student's mastery of content at the higher order levels of cognition' (Adak, 2017,

The unexamined life is not worth living (Socrates, 399 BCE).

p. 1074). According to Shah, (2019), constructivism is not only popular, but resulted in ‘significant success’ in students’ academic achievement:

Constructivism has been a very powerful model for explaining how knowledge is produced in the world as well as how students learn. Moreover, constructivist teaching practices are becoming more prevalent in teacher education programs, while demonstrating significant success in promoting student learning. (Shah, 2019)

In addition, constructivist pedagogy in the classroom facilitates a good deal of students’ engagement (Hunter, 2015; Zajda, 2018a; Shah, 2019; Zaphir, 2019). Constructivist pedagogy, by its nature, focuses on critical thinking and critical literacy activities during group work, and promotes students’ cognitive, social and emotional aspects of learning.

The History of Constructivism

The idea of constructivism has its roots in the ancient world, beginning with Confucius (551-479 B.C.), Plato, Aristotle (384-322 B.C), Socrates, and his dialogues with his followers, in which he asked his students specific questions that led his students to realize for themselves the weaknesses in their thinking, and Epicurus, who invented a version of the Golden Rule, and many other great thinkers. In Homer’s *Odyssey* (700 B.C.), goddess Calypso tells Odysseus: ‘I’ll be as careful for you as I’d be for myself in like need. I know what is fair and right.’ **Golden Rule**, in the Gospel of Matthew (7:12) states ‘In everything, do to others what you would have them do to you’. This rule of moral conduct depicts the Christian’s duty to people in general. The Socratic dialogue continues to be a powerful analytical and cognitive tool used in analysis and critical thinking, and is employed by teachers in constructivist pedagogy, and elsewhere to assess and evaluate students’ learning and plan new learning experiences. Socrates’ idea that ‘the unexamined life is not worth living’, is one of the earliest manifestation of what we now call critical thinking, and critical literacy.

Constructivism, as a modern learning theory can be traced to Jean-Jacques Rousseau, Johann Heinrich Pestalozzi, Maria Montessori, John Dewey, Frederic Barlett, Jean Piaget, Jerome Bruner, and many others. Barlett (1932), as one of the forerunners of cognitive psychology, pioneered the modern constructivist approach. Learners, according to him, employ schemas in their meaning making process, when they read the stories, and in seeking to understand, they connect them to existing cognitive structures and prior knowledge. Barlett also studied the constructive character of remembering (Barlett, 1932). Modern constructivism originates from the work of a Swiss developmental psychologist Jean Piaget (1936, 1977). According to Piaget, children perceive and construct an understanding of the world around them, in their own and unique way. For Piaget, knowledge arises from the individual’s activity, either cognitive or psychomotor. As a result, Piaget argued that ‘All knowledge is tied to action, and knowing an object or event is to use it by

assimilating it to an action scheme' (Piaget, 1967, pp. 14–15). The ideas of a mental scheme, and the associated terms of assimilation and accommodation, are central to Piaget's modern constructivist theory of knowledge. Schemes are **cognitive** structures that an individual uses to organize and categorize knowledge, objects and events to interpret the phenomena in the world.

Adding to the work of Piaget, von Glasersfeld (1995) suggested that there were two key principles that establish the purpose of constructivism. Firstly, that knowledge is not passively received, but rather that it is built up by the cognizing subject, and secondly, that the function of cognition is adaptive and serves the organisation of the experiential world rather than the discovery of an ontological reality. Similarly, Adler (1997) suggested that constructivism was the view that 'the manner in which the material world shapes and is shaped by human action and interaction depends on dynamic normative and epistemic interpretations of the material world' (Adler, 1997, p. 322).

In addition, Guzzini (2000) also argued that constructivism is a reflexive meta-theory, combining epistemology, ontology, and reflexivity:

This reconstruction starts by taking seriously the double sociological and interpretivist turn of the social sciences. Based on 'double hermeneutics', constructivism is perhaps best understood by distinguishing its position on the level of observation, the level of action proper, and the relationship between these two levels...that constructivism is epistemologically about the social construction of knowledge and ontologically about the construction of social reality. It furthermore asks us to combine a social theory of knowledge with an intersubjective, not an individualist, theory of action. (Guzzini, 2000)

With reference to constructivism, McLeod (2019), like many other constructivist researchers, suggested that knowledge is indeed socially constructed, and that learning is a necessarily active process (see Dewey, 1938; Bruner, 1963; Vygotsky, 1978). The purpose of constructivism is, then, for the individual to construct her or his own meanings out of the elements of individual experience (see McLeod, 2019).

Constructivist Theory

Constructivism as a view of learning, maintains that each person, using perception, and thinking, creates his or her meaningful knowledge and interpretations of the world. Constructivist teaching philosophy is based promoting students' autonomy, where students' thinking 'drives the lessons, where dialogue, inquiry, and puzzlement are valued' and assessing students' learning is in the context of teaching (Akpan & Beard, 2016, p. 392).

There exists a consensus, among researchers writing on constructivism, that constructivism emphasises how knowledge is constructed, as the result of a person's interaction in the world, either individually or with others (Piaget, 1972; Fosnot, 1989; Steffe & Gale, 1995; Oldfather et al., 1999; Packer & Goicoechea, 2000; Thompson, 2000; OECD, 2009a, b, c). Thompson (2000) argued that constructivism is not a theory of learning, but a model of knowing and constructivism can be

used to build a theory of learning. Richardson (2003), however, argues that the view of constructivism as a *learning theory* has ‘guided most of the developments of constructivist pedagogy’ (Richardson, 2003, p. 1624).

McLeod (2019) argues that constructivism is ‘an approach to learning that holds that people actively construct or make their own knowledge and that reality is determined by the experiences of the learner’ (McLeod, 2019). In explaining constructivists’ theory, Arends (1998) asserted, like other researchers, that constructivist theory of learning refers to individual’s cognitive construction of meaning through experience. Constructivism is, according to Richardson (2003), a theory of ‘learning or meaning making’ (Richardson, 2003). This meaning making process takes place during an interaction between what individuals already know and new knowledge. Shor (1992), defined constructivism as a way of building knowledge about self, school, everyday experience, and society through reflection and meaning making (Shor, 1992). The three guiding principles of constructivist learning are:

- Learners are *active participants* in their learning, and learning by doing, or experiential learning is central to constructivist leaning in practice (Howe & Berv, 2000)
- Learners are *self-regulated* and they construct and monitor their learning, where meta-cognition plays an important role in meaningful learning.
- *Social interactions* is essential for meaningful learning.

In constructivist learning, as demonstrated earlier, students, when confronted with new learning tasks, are actively engaged in the meaning-making process, by deciphering and constructing their own interpretation and knowledge of the world. The concept of meaning making was initially developed and explained by Postman and Weingartner (1971) as a dynamic and dialogical process, where the focus is on the individuality and the uniqueness of the meaning maker (p. 94).

Brooks and Brooks (1993) argued that constructivism is a theory about knowledge and learning. Fosnot and Perry (2005), however, stressed that ‘Constructivism is a theory about learning, not a description of teaching’ (Fosnot and Perry (2005), p. 33). Constructivist learning theory is also based on the belief that *meaningful* learning occurs, when learners are actively involved in a process of meaning-making and knowledge construction, rather than passively receiving and memorizing information (rote-learning). Learners become the meaning-makers, as they attempt to understand new ideas. As such, constructivist teaching is likely to promote critical thinking and create intrinsically-motivated and autonomous learners. Matthews (2000, p. 17) identified 17 different forms of constructivism in education, and he also mentions three major constructivist traditions: philosophical, sociological, and educational. For him, sociological or social constructivism considers ‘...growth of science and changes in its theories and philosophical commitments are interpreted in terms of changing social conditions and interests’ (Matthews, 2000, p. 169). In addition, Phillips (2000) described two major types of constructivism: social constructivism and psychological constructivism, or cognitive constructivism. Maypole and Davies (2001) when analysing students’ perceptions of constructivist learning in a community college American history course, were able to demonstrate that

students ‘thought more critically and independently, they developed cognitively and affectively, and they enjoyed the learning process’ (Maypole & Davies, 2001). More recently, Akpan and Beard (2016) discussed classroom teaching, using constructivist teaching strategies to enhance academic outcomes of students with special needs.

Implicit in constructivist views of learning is the idea that an effective learner actively monitors his or her learning and the meaning-making process, where metacognitive skills and reflection play an important role. Constructivists view learning as dependent on the degree to which learners can activate existing cognitive structures and construct new knowledge, which added to existing knowledge. Constructivist pedagogy of learning and teaching emphasizes that there are perceptual and cognitive differences in the way people perceive things and how they *form ideas* related to the linguistic, visual, logical, interpersonal, intrapersonal, environmental and existentialist factors (see also Gardner’s theory of multiple intelligence, 1983, 1999). Fosnot and Perry (2005) offered a cultural and post-structuralist view of representation in constructivist learning, where individuals, by means of language and interpretation, end up constructing their own symbolic representations of new knowledge:

All cultures represent the meaning of experience in some way: through symbol, music, myth, storytelling, art, language, film... Abstracting and generalizing experience by representing them with symbols (itself a constructive process) allows the creation of ‘semiotic spaces’ where we can negotiate meaning (Wertsch, 1991). We may not understand in the same way as other humans who have had different experiences, but by using language, stories, and metaphors and models, we can listen to and probe each other’s understanding... Constructing symbolic representations empowers us to go beyond the immediacy of the concrete, to cross cultural barriers, to encounter multiple perspectives that generate new possibilities, to become conscious of our actions on the world in order to gain new knowledge with which to act. (Fosnot & Perry, 2005, pp. 30–31)

Drawing on Doll (1993), Fosnot and Perry (2005), also argued that constructivism, unlike Piaget’s functionalist-structuralist paradigm, and Skinner’s functionalist perspective, is a poststructuralist psychological theory:

... one that construes learning as an interpretive, recursive, nonlinear building process by active learners interacting with their surround—the physical and social world. It is a psychological theory of learning that describes how structures, language, activity, and meaning-making come about, rather than one that simply characterizes the structures and stages of thought, or one that isolates behaviours learned through reinforcement. It is a theory based on complexity models of evolution and development. (Fosnot & Perry, 2005, p. 34)

Post-structuralist interpretation of constructivist learning adds another perspective to the on-going discourse surrounding the complexity of constructivism as a theoretical paradigm, and a theory of learning.

Constructivist Approaches: Two Major Strands of the Constructivist Perspective

Cognitive constructivism, or psychological constructivism draws on earlier research of Piaget (1977), Kelly (1991), Black and Ammon (1992), Fosnot and Perry (2005), and others. This approach is informed by developmental psychology, and learning theories (cognitive), which suggest that learners actively construct the meaning around ideas they encounter. Here, the individuals mentally construct the meaning around the concept, and these constructions are 'idiosyncratic, dependant in part on the learner's background knowledge (Richardson, 2003, p. 1625). Cognitive constructivism places more emphasis on the 'individual cognitive structuring process' (Fosnot & Perry, 2005, p. 28).

Social-Cultural Constructivism

By contrast, social-cultural constructivism draws on Vygotsky (1934a, b), Bruner (1963), Bandura (1977), Kolb and Fry (1975), Wertsch (1991), O'Loughin (1992), Hirtle (1996), Howe and Berv (2000), Kukla (2000) and many other researchers globally. Social constructivism emphasizes the importance of culture and context in understanding what occurs in society, and constructing knowledge based on this understanding (Watson, 2003; Beck & Kosnik, 2006). This perspective is closely associated with many contemporary theories; most notably the socio-cultural and developmental theories of Vygotsky, Bruner, and Bandura's social cognitive theory.

Social constructivism, as a variety of cognitive constructivist theories, emphasizes social interaction, the role of language in the meaning-making process and collaborative nature of much learning. Social constructivism was first developed by Lev Vygotsky. As originally proposed by Vygotsky (1934a, b), social constructivism focused on the role of environment, and its impact on individual's language development (Onuf, 2003). Onuf (2013) also argued that social constructivism begins when individual 'construct, or constitute, social reality, even as their being, which can only be social, is constructed for them' (Onuf, 2013, p. 1). Onuf (2003), like Vygotsky (1978) and other social constructivists, believed that a principal medium of social construction is language. Onuf (2003) further argued that when it comes to constructivist analysis of language and agency, 'language makes us who we are' (Onuf, 2003, p. 27).

Although Vygotsky was a cognitive and developmental Russian psychologist, he did not accept the assumption made by cognitive psychologists, such as Piaget and others, that it was possible to separate learning from its social context. In contrast to Piaget and his followers, Vygotsky argued that all cognitive functions originated in social interactions and that learning did not simply comprise of the assimilation and accommodation processes of new knowledge by learners. For Vygotsky (1968), language and culture were the frameworks through which humans experience,

communicate, and understand reality (Vygotsky, 1968, p. 39). Vygotsky's main relevance to social constructivism derives from his theories about language and thought, and social interaction. Vygotsky believed that social interaction played a major role in the development of language and cognition (Vygotsky, 1978). Vygotsky's socio-cultural theory stressed that individuals acquired their language and knowledge through a socially mediated process (Zajda, 2018b). Mahn and John-Steiner (2012) examined two central ideas of Vygotsky, dealing with the 'unification of thinking processes with language' and the role of the internal system of meaning 'created through the use of language':

Central to Vygotsky's work is the examination of the unification of thinking processes with language processes. Vygotsky spends most of his last and major work *Thinking and Speech* describing the nature of verbal thinking—the entity that issues from that unification, and its key role in the development of higher psychological processes. We describe a central, but little known, aspect of his work, the internal system of meaning that is created through the use of language in social interaction and that is central to concept formation. Having described Vygotsky's theory and method. (Mahn & John-Steiner, 2012)

Social constructivism is based on specific assumptions about reality, knowledge, and learning (Searle, 1995; Thomas et al., 2014). Martin and Sugarman (1999) offered a meaningful description of social constructivism, as an approach to both learning and teaching, which is based on engagement, social interaction and dialogue:

We acquire, develop, convey, and confer upon others the symbolic cognitive tools through which we manage our psychological engagement with the world. (Martin & Sugarman, 1999, p. 8)

Judith Watson (2003) uses examples from classroom practice to demonstrate how, within a framework of social constructivism, small changes in teachers' practice can promote effective teaching in pupils of all ages and levels of ability, across the curriculum (see also Beck & Kosnik, 2006). To use social constructivism in the classroom, it is necessary to know and understand critically epistemological assumptions that define it, namely the nature of the nexus involving reality, knowledge, and learning:

Reality: Social constructivists believe that reality is constructed through human activity. Members of a society together invent the properties of the world (Kukla, 2000). For the social constructivist, reality cannot be discovered: it does not exist prior to its social invention.

Knowledge: To social constructivists, knowledge is also a human product, and is socially and culturally constructed (Gredler, 1997). Individuals create meaning through their interactions with each other and with the environment they live in.

Learning: Social constructivists view learning as a social process. It does not take place only within an individual, nor is it a passive development of behaviors that are shaped by external forces. Meaningful learning occurs when individuals are engaged in social activities (cited in Kim, 2001, p. 3).

These two strands, or theories, namely cognitive constructivism and social constructivism, are different in emphasis, but they also share many common perspectives about teaching and learning. Richardson (2003), for instance, argues that the

difference between the two forms of constructivism is that cognitive constructivism draws on developmental psychology, whereas social constructivism is informed by sociology and cultural disciplines.

Before looking at the differences between cognitive and social constructivists, it might be worthwhile to look at what they have in common. Jonassen's (1994) description of 8 pedagogical practices that differentiate *constructivist* learning from other learning environments is a succinct and practical summary of the constructivist perspective:

1. Constructivist learning environments provide *multiple* representations of reality.
2. Multiple representations avoid oversimplification and represent the complexity of the real world.
3. Constructivist learning environments emphasize knowledge construction instead of knowledge reproduction.
4. Constructivist learning environments emphasize authentic tasks in a meaningful context rather than abstract instruction out of context.
5. Constructivist learning environments provide learning environments, such as real-world settings or case-based learning instead of predetermined sequences of instruction.
6. Constructivist learning environments encourage thoughtful reflection on experience.
7. Constructivist learning environments 'enable context- and content- dependent knowledge construction'.
8. Constructivist learning environments support 'collaborative construction of knowledge through social negotiation, not competition among learners for recognition' (Jonassen, 1994; see also Jonassen, 2000).

The above Jonassen's summary of the constructivist perspective in the classroom defines both social and cognitive constructivist pedagogies. Most of these statements typify current approaches to classroom teaching globally. What then is the unique quality of constructivist pedagogy? To me the most significant tenant of constructivist pedagogy is the *meaning making* process in the classroom, which embraces both cultural diversity and multiple perspectives in learning and teaching. In research literature, the most frequently observed characteristic, defining constructivist learning, is learning by doing, 'discovery learning' or 'experiential learning', popularised by Bruner (1963) and Kolb and Fry (1975). Bruner believed that discovery learning helps students learn to relate ideas to each other and to existing knowledge, so that students are able to independently solve problems in real situations. Similarly, David Kolb and Fry (1975) held that meaningful learning can only be prompted by experiential learning. He was also influenced by Dewey and Piaget. In the ancient Greece, it was Aristotle who said 'For the things we have to learn before we can do them, we learn by doing them' (Bynum & Porter, 2005). Furthermore, as Richardson (2003) explained, constructivist pedagogy is associated with the creation of classroom environments that are 'grounded in a constructivist theory of learning, with goals that focus on individual students developing deep understandings...' (Richardson, 2003, p. 1627). Richardson also presented her five dimensions of constructivism:

1. Attention to the individual and respect for student's background (informed by student-centred classroom pedagogy)
2. Facilitation of group dialogue, to create a consensus on understanding a key idea/topic (focusing on cooperative learning)
3. Introducing knowledge via text, readings, activities and ICT.
4. Opportunities for students to engage in constructing their own new knowledge, based on activities
5. Developing student's meta-awareness of their own understanding (Richardson, 2003, p. 1626).

In addition, constructivist learning increases reflection, metacognition, teacher-initiated teaching of knowledge, skills, critical thinking, and the use of multi-modal models in learning, instead of passive and uncritical knowledge reproduction. Also, social constructivist learning and teaching strategies make an effective use of collaborative and cooperative groups, analysed below.

Constructivist Learning in the Classroom

In critiquing constructivist learning in the classroom we need to examine the following major factors affecting learners: individual differences and students' learning, teachers' knowledge, and cultural influences.

Individual Differences and Learning Styles

Learners from diverse cultures, with different levels of knowledge and skills and at different stages of cognitive development, are likely to exhibit different ways of learning. Yet, in a traditional classroom there is a tendency to adopt a singular, unifying and one-dimensional approach to the learning/teaching process. There is also a tendency to normalise learning using the normal curve, and by teaching to the 'average' students, which ignores individual differences. The learner's question 'Is this the right way?' already reflect the uncritical acceptance of learning. Students learn in diverse ways. How and what students learn is influenced and determined by a variety of factors and variables that can be grouped under affective, cognitive, psychomotor, intelligence, perception, cultural, and environmental domains. The unresolved *nature-nurture* discourse is just as relevant to the learning process today as it was at the turn of the century.

The term '*learning style*' is used widely in education and training to *refer* to a range of '... habitual *way* in which some individuals processes and organise *information*, at times based on their *preferred learning style* and that of an *individual's style* (Dunn & Smith, 1990; Sadler-Smith, 2001; Dunn et al., 2009). Most cognitive psychologists agree that *cognitive learning styles* refer to the preferred way

individual processes information. Unlike individual differences in abilities (e.g., Gardner, Guilford, Sternberg and others), which describe peak performance, learning styles describe a person's typical mode of thinking, remembering or problem solving. Furthermore, learning styles are usually considered to be bipolar dimensions whereas abilities are unipolar (ranging from zero to a maximum value). Having more of ability is usually considered beneficial while having a particular cognitive style simply denotes a tendency to behave in a certain manner. Cognitive style is usually described as a personality dimension, which influences attitudes, values, and social interaction.

Research findings have demonstrated that one teaching style or modality does not meet all individual needs and learners should be taught in multi-modal and multi-sensory learning environments (Stoffers, 2011; Kharb et al., 2013; Al Sayyed Obaid, 2013; Crogman & Trebeau Crogman, 2016; Abdullah Alwaqassi, 2017). Kharb et al. (2013) for instance, discovered that students' the most common uni-modal preference was 'kinaesthetic, followed by visual, auditory and read and write' and stressed that educators need to be aware of different learning styles:

One single approach to teaching does not work for every student or even for most of the students. The educators' awareness of the various learning styles of the students and their efforts towards matching the teaching and learning styles may help in creating an effective learning environment for all the students. (Kharb et al., 2013)

In addition, pedagogues need to be acutely aware of the 'biological and developmental nature of other learner's modalities' (Zajda, 2008a, b, c, p. 98). Research has shown that the link between sensory abilities (in this case colour and sound discrimination) and general intelligence (the *g* factor) is weak, suggesting that sensory abilities are quite distinct from general intelligence (Acton & Schroeder, 2001).

Effective Teachers and Teachers' Knowledge

McInerney and McInerney (2018) has defined an effective school as 'one that promotes the progress of its students in a broad range of intellectual, social and emotional outcomes, taking into account socio-economic status, family background and prior learning' (McInerney & McInerney, 2018). Slavin (2020) summarises good and effective pedagogy in term of the following four characteristics:

- Knowledge of subject and teaching resources
- Knowledge of students and their learning (these are related to self-knowledge and self-regulation)
- Critical thinking and problem-solving skills (reflection)
- Communication skills and decision making

Teachers' own understanding of the subject matter, and the extent and depth of their knowledge is significant in a constructivist classroom. Slavin's (1984) popular

model of effective teaching, useful in constructivist pedagogy, is based on 4 core characteristics:

1. *Quality of Instruction*: The degree to which information or skills are presented so that students can easily learn them. Quality of instruction is largely a product of the quality of the curriculum and of the lesson presentation itself.
2. *Appropriate Levels of Instruction*: The degree to which the teacher makes sure that students are ready to learn a new lesson (that is, they have the necessary skills and knowledge to learn it), but have not already learned the lesson. In other words, the level of instruction is appropriate when a lesson is neither too difficult nor too easy for students.
3. *Incentive*: The degree to which the teacher makes sure that students are motivated to work on instructional tasks and to learn the material being presented.
4. *Time*: The degree to which students are given enough time to learn the material being taught (Slavin, 1984).

Effective and Engaging Teachers

What makes a great pedagogue in the classroom today? This can be summarised by the following 5 main characteristics: teacher's self-efficacy, lesson structure, awareness of cultural diversity, positive motivational atmosphere, and mastery skills. These are described below:

1. Effective teachers have a sense of *self-efficacy* (the belief and confidence that they can successfully influence the learning of students)
2. Structure their lessons as constructivist and student-based learning experience (using advanced organisers, executive summaries, metacognition, etc.)
3. Sensitive to cultural diversity and employ global/cross-cultural perspective
4. Maintaining positive classroom climate and positive expectations
5. Exhibit mastery of teaching skills: high level of knowledge, excellent communicator, effective questioning and the use of motivational strategies (Zajda, 2018a).

Thus, effective teaching is shaped by the teacher's skills in regard to knowledge, organisation, clarity, classroom management, lesson planning, objectives, the use of engaging questioning techniques, and above all, showing students how to learn (see also David Fontana, *Psychology for Teachers*, 1995, p. 384). Successful teachers tend to be friendly, enthusiastic, responsible, imaginative, systematic, understanding and warm. Current research suggests that effective pedagogues are those who:

- demonstrate a mastery of knowledge
- show enthusiasm
- set *realistic* lesson objectives and outcomes
- have high, rather than low, students' expectations
- provide frequent positive reinforcement and feedback
- impose structure on the content to be covered

- present new material in an engaging, and a step-by-step manner
- have a well-managed classroom where children have the optimum opportunity to learn and interact
- maintain a positive and motivational environment
- communicate empathy and adjusting teaching to individual needs (teaching pace)
- use a variety of questioning techniques to motive students and to check for comprehension
- maintain a sense of balance (knowledge, skills, values and behaviour outcomes)
- use a variety of teaching styles and resources
- use student-centered approaches to learning (cooperative/collaborative learning strategies)
- use effective assessment tools—assessment to improve learning
- demonstrate the learning in ways that stress *higher level* skills and involve active engagement by students
- are effective classroom managers of authentic learning (see also OECD, 2013, 2019a).

Cultural Influences

Constructivism and constructivist learning theory are influenced by a variety of social, cultural, and dominant educational ideologies. Invariably, one of the unresolved issues is the use of constructivism as a learning theory in a culturally diverse classroom (Zajda & Majhanovich, 2021). Is it appropriate to use constructivist learning in such settings? Richardson (2003), using her own research findings, argues that this was an ‘imposition of an inappropriate pedagogy’ on minority students (Richardson, 2003, p. 1633). Both teachers’ and students’ attitudes towards constructivism as a learning theory can be attributed to their cultural values and beliefs about the nature of learning and teaching. For instance, in some traditional cultures, teachers are valued as masters of their knowledge and skills and are expected to teach in a curriculum and standards defined milieu. Academic performance is valued above all. In other cultures, there are different pedagogical models defining performing schools.

One needs to take into account that constructivism, as a construct, in both psychological and social constructivism, has evolved epistemologically as a ‘Western, liberal, and individualistic (Eurocentric)’ idea (Richardson, 2003, p. 1633). Some researchers have written about ‘cultural imperialism’, or the imposition by one usually politically or economically dominant nation of various aspects of its own culture and ideology onto another cultures. The critique of this perspective was addressed by Bowles and Gintis (1976) in their influential book *Schooling in capitalist America*. This argument continues to be relevant.

To apply meaningfully pedagogical models that are grounded in the philosophy of social constructivists, it is important to know the premises that underlie them. First, social constructivists believe that *reality* is constructed through human

activity. Members of a society together invent the properties of the world (Kukla, 2000). For the social constructivist, reality cannot be discovered: it does not exist prior to its social invention. Second, to social constructivists, *knowledge* is also a human product, and is socially and culturally constructed. Individuals create meaning through their interactions with each other and with the environment they live in. Third, social constructivists view *learning* as a social process. It does not take place only within an individual, nor is it a passive development of behaviours that are shaped by external forces. Meaningful learning occurs when individuals are engaged with other in social activities.

To perceive constructivist learning and pedagogy critically, it is useful to contrast the two dominant approaches to classroom teaching: traditional teaching and constructivist teaching (see Table 3.1 below).

Improving Constructivist Pedagogy: Learning and Teaching

When analysing the effectiveness of constructivist pedagogy in producing the desired quality teaching and quality learning outcomes, we need to take into account students’ learning strategies and positive reinforcement, the nature of teaching, specifically questioning techniques, as well as students’ cultural identities, and their stages of cognitive social and emotional development. In addition, we need to add such factors as metacognition, positive reinforcement, individual differences, cultural diversity, motivational atmosphere and teachers’ strategies, as well as and social and cultural factors at home, and the quality of teachers.

How do students learn best?

First, ask yourself, ‘How do I learn best?’

Do you learn better when someone tells you exactly how to do something, or do you learn better by doing it yourself? Many people are right in the middle of those two scenarios. This

Table 3.1 Differences between traditional and constructivist classrooms

Traditional classroom	Constructivist classroom
1. Teacher-dominated didactic learning	1. Learning is interactive and teachers engaged in an interactive manner
2. Students learn new textbook material by rote	2. Students engaged in meaning-making activities
3. Prescribed curriculum defines learning	3. Students construct their own knowledge
4. Students learn alone in a passive manner	4. Students learn in cooperative groups
5. Students learn for examinations	5. Students engage in self-directed mastery learning
6. Assessment to rank students, not improve learning	6. Assessment is to improve meaningful learning
7. Rigid and prescribed curriculum	7. Students’ knowledge, interests and questions are valued

has led many educators to believe that the best way to learn is by having students construct their own knowledge instead of having someone construct it for them. (Source: http://www.ndt-ed.org/TeachingResources/ClassroomTips/Constructivist%20_Learning.htm)

This belief that the more effective way to learn in the classroom settings, is for students constructing their own knowledge, is explained by the Constructivist Learning Theory. This theory states that learning is an active process of creating meaning from different experiences. In other words, students will learn best by trying to make sense of something on their own, with the teacher as a guide to help them along the way (see also Shively, 2015).

Suggestions for Constructivist Pedagogy

- Assess/determine students' prior knowledge, understanding, skills and experiences about a concept/topic before teaching it to them.
- Encourage student critical thinking and inquiry by asking them thoughtful, open-ended questions, and encourage them to ask questions to each other.
- Encourage and accept student autonomy and initiative.
- Try to use raw data and primary sources, in addition to manipulative, interactive, and physical materials.
- When assigning tasks to the students, use cognitive and analytical terminology such as 'classify', 'analyze', 'predict', 'evaluate', and 'create'.
- Encourage communication between the teacher and the students and also between the students (cooperative groups)
- Ask follow up questions and seek elaboration after a student's initial response.
- Put students in situations that might challenge their previous ideas.
- Provide enough time for students to construct their own meaning when learning something new.

(Adapted from Brooks, J. and Brooks, M. (1993). *In Search of Understanding: The Case for Constructivist Classrooms*, ASCD) http://www.ndt-d.org/TeachingResources/ClassroomTips/Constructivist%20_Learning.htm

The above suggestions are very useful, but we still need to consider macro and micro-sociological factors affecting the teaching and learning process as a whole. There are numerous assumptions here. Specifically, we need to consider students, and their cognitive, social and emotional development, their identities, individual differences, cultural diversity, classroom environments, teachers, and schools. Together, they influence significantly the quality of teaching and learning in schools, and students' performance (Zajda, 2018a, 2021). In my graduate classes (M.Teach.), I have used some of the ideas above, employing my own synthesis of behavioural, cognitive, humanistic and social constructivism, as well as focusing on critical thinking, and critical literacy, grounded in critical discourse analysis.

Evaluation

As demonstrated above, there is a great deal of research dealing with constructivist learning teaching, and academic achievement. One of the problems with understanding and discussing constructivism and classroom application is that this particular construct draws on many diverse disciplines, including philosophy, psychology, sociology and education. This was noted by Doolittle and Hicks (2003) who stressed that constructivism, as a concept, is a diverse construct that lends itself to numerous interpretations, be they psychological, social, cultural or pedagogical:

...the concept of 'constructivism' is diverse, with varied interpretations. This diversity necessitates that the asserting of constructivist claims be made with caution and significant forethought. (Doolittle & Hicks, 2003, p. 81)

The other issue is, that constructivism in teaching tends to be discussed as a teaching method only (a method is how?), rather than 'why'? We need to consider other parts of this curricular process, including the student's self-concept, identity, culture and the ecology of the classroom. Social and cultural differences have a significant effect on schools, teachers, students and pedagogies employed (Zajda, 2020a). The constructivist pedagogy, or any other classroom pedagogy, is likely to be affected by social, economic and cultural differences. Vygotsky's learning theory stressed the social dimension in thought and language (Vygotsky, 1973, pp. 134–137). Hence, the Vygotskian prefix 'socio' added to the term 'constructivism' indicates the acknowledgement of cultural issues in learning, as opposed to cognitive approaches to learning.

The research on constructivist teacher education by Dangel (2011), included findings, which suggested six key mediatory experiences for preservice teachers: social interaction, meaningful learning experiences, ownership, reflection, developing a personal theory of learning, and a supportive environment (Dangel, 2011). All of these principles of constructivism, especially the ones offering meaningful learning experiences, developing a personal theory of learning, and providing an inclusive and supportive environment continue to be relevant in learning and teaching globally.

One of the most serious issues with the use of constructivist pedagogies in schools arises when it is misused by teachers in their classroom environments, who do not really understand the epistemological complexity and philosophy of constructivism. The other problem is when constructivist pedagogies become the preferred method of teaching, imposed on all learners. There is no one 'right way', as Carnoy writes, 'to organize an education system' (Carnoy, 1999, p. 84). Richardson also warned us against the misuse of the constructivism pedagogy, 'when it becomes valued as best practice for everyone' (Richardson, 2003, p. 1634).

By imposing the constructivist pedagogy, as the dominant model, we may be ignoring students' cognitive, social, affective, and cultural differences and other effective pedagogical practices in improving motivation, students' engagement and academic achievement (Zajda, 2018a; Zajda & Majhanovich, 2021). Since knowledge, skills and academic performance are the most highly valued commodities in

the knowledge society globally, teachers play a significant role in this process. The quality of teaching and learning will depend, not so much on the teaching style, as on the quality of its human capital— teachers, the quality of their professional knowledge, the quality of their training, and the type of incentives available (salaries, promotion, job opportunities and rewards for excellence in teaching). These much-needed incentives would attract quality teachers to the profession, as they do in Finland and elsewhere, and increase their status and prestige in schools, and improve their capacity to generate and transmit quality knowledge, performance standards, and skills to their students in culturally and globally diverse classrooms (see OECD, 2007, 2009a, 2013, 2019a).

Conclusion

The key idea of constructivist pedagogy is that student's meaningful knowledge is actively constructed, in diverse ways, employing cognitive, cultural, affective and social dimensions, and that individual learning, in a constructivist sense, is a necessarily socially active process. This idea is most relevant to the process of creating effective learning environments in schools globally. In addition, constructivist pedagogy promotes critical thinking and critical literacy. By comparison with traditional models of teaching, it also integrates more effectively students' cognitive, social and emotional learning, offering a holistic approach in the classroom. It can be certainly used in learning and teaching as one approach, within the multiple pedagogical models and strategies, designed to maximise effective teaching, students' engagement, learning environments, academic standards and quality learning for all. Research informed teachers tend to use constructivist learning to improve meaningful and authentic learning. It is argued that the effectiveness of constructivist learning and teaching is dependent on students' self-concept, cultural identity, cognitive, social and emotional development, and students' academic achievement goals and their relevant learning strategies.

Chapter 4

Discrimination and Self-Fulfilling Prophecy in Schools Globally



Global Discrimination and Discriminatory Practices: Introduction

In order to create effective learning environments in schools globally, we need to consider the nature and the quality of classroom environments and the existence of classroom discrimination and discriminatory practices affecting students' identity, self-esteem, motivation, desire to learn and academic achievement. In this chapter I analyze research findings dealing with various forms of classroom discrimination, including intelligence discrimination, cultural identity discrimination, race and ethnicity discrimination, and the nexus between the self-fulfilling prophecies (SFP) and students' resultant academic achievement. All of these are likely to affect the quality of learning environments.

What Is Discrimination?

One of the most serious issues confronting societies and schooling globally is a continuing, ubiquitous, and powerful systemic discrimination, and the use of discriminatory practices in schools by some teachers. Discrimination exists, both locally and globally, and it results in discriminatory practices by both teachers and students. Some teachers tend to discriminate against certain students on the basis of intelligence testing, cultural identity, SES, race, ethnicity and gender, to name a few. Similarly, students discriminate against other students in the classroom, on the basis of race and ethnicity, in particular, resulting in aggressive and unacceptable forms of bullying in schools.

According to the American Psychological Association (APA) (2019), 'Discrimination is the unfair or prejudicial treatment of people and groups based on characteristics such as race, gender, age or sexual orientation'. Discrimination is

described not only as a serious health issue, but also how it can be damaging to a person's educational and job opportunities:

Discrimination is a public health issue. According to the 2015 Stress in America Survey, people who say they have faced discrimination rate their stress levels higher, on average, than those who say they have not experienced discrimination. That's true across racial and ethnic groups.

Chronic stress can lead to a wide variety of physical and mental health problems. Indeed, perceived discrimination has been linked to issues including anxiety, depression, obesity, high blood pressure and substance abuse. Discrimination can be damaging even if you haven't been the target of overt acts of bias. Regardless of your personal experiences, it can be stressful just being a member of a group that is often discriminated against, such as racial minorities...The anticipation of discrimination creates its own chronic stress. People might even avoid situations where they expect they could be treated poorly, possibly missing out on educational and job opportunities (APA, 2019).

Discrimination is the universal practice of treating someone differently because of that person's perceived cultural identity, or other related characteristics (Zajda, 2019a, b). Discrimination can be positive or negative. It can be positive when an applicant is offered a job because of that person's intelligence, qualifications, or a school tie (denoting status, distinction and privilege). However, discrimination often manifests itself as a negative phenomenon – for example, when students are discriminated against on the bases of their cultural identity, intelligence, abilities, academic performance, socio-economic status (SES), race, ethnicity and gender.

Legal and Ethical Implications of Discriminatory Practices in Schools

Teachers and schools need to be aware of legal and ethical implications of discriminatory practices in schools. A number of countries have various human rights policies and anti-discrimination acts. In Australia, public schools and universities are subject to the *Anti-Discrimination Act 1991* and the *Human Rights Act 2019*. The *Anti-Discrimination Act 1991* makes discrimination; sexual harassment and vilification in education against the law (see also Australian Human Rights Commission, 2020). The legislation applies to all facets of education, including:

- admission and enrolment applications
- terms of admission and enrolment
- variation of the terms of a student's enrolment
- denial or limitation of benefits normally resulting from enrolment
- exclusion or suspension of students
- assessment and examination
- access to resources and facilities
- treatment of a student in regard to training or instruction (www.legislation.act.gov.au)

Discrimination in Schools

Graziano (2017), when analyzing teachers' discriminatory attitudes in the classroom, suggests that discrimination can be direct or indirect.

Direct discrimination is when someone is treated differently as a result of a characteristic he or she possesses (race, age, gender, etc.).

Indirect discrimination occurs when a rule, policy, or basic practice marginalizes a particular group of people (Graziano, 2017).

We all suffer from some forms of biases, leading to discrimination, and tend to 'filter out the reality of a situation in favour of our discriminatory assumptions' (Kussrow, 2012, p. 93). Discrimination, be it overt or covert, conscious or unconscious, is almost like an undeclared war by humans, against other humans in a stratified social system, by exercising power, domination and control, (Zajda, 2020a). In a world, characterised by continuing unequal distribution of socially valued commodities, especially unequal access to education, power, wealth, and privilege, humans will continue to exist in conflict-driven environments, where prejudice and discrimination are present. The very existence of social stratification, selection, and placement in society already legitimizes discrimination and prejudice in education. Such constructs as intelligence, intelligence testing, race, ethnicity, cultural capital, social class, SES, income, education, wealth, and poverty influence both teachers' perceptions of their students' cognitive abilities and academic achievement, as well as students' overall attitudes towards schooling and academic performance (Trent et al., 2019). As Julia Kussrow (2012) observed earlier, 'There are many kinds of discriminations and we have all been discriminated against in more ways than we know' (Kusrow, 2012, p. 93). Kussrow suggested that some teachers, due to their perceived bias, concerning their students' cultural identities, and their abilities, were either knowingly or unknowingly practicing discrimination in the classroom, thus normalizing and legitimizing the practice (see also Graziano, 2017).

Even though we are not born with discriminatory attitudes, we soon acquire them by observing others and imitating their prejudices. Sometimes this is internalised unconsciously, sometimes it is due to peer group pressure, or institutional constraints.

Overall, discrimination and discriminatory practices in society are micro-social, or reflecting classroom environment, and macro social, or portraying schools as formal organizations. Together, they act as powerful and ubiquitous forces, which are affecting all individuals, be they at school, university or workforce.

Discrimination in schools greatly affects students' mental health, motivation and academic achievement in a negative and damaging way in the long term (OECD, 2012). Students' experience can be a positive reaffirmation of what they already believe about themselves, or can be the opposite, a constant reminder that they are not considered to be able or academically competent, high achieving, or intelligent

by society's general standards. Hence, teachers' pre-conceived and biased notions about the performance or intelligence level of students, based on prejudice, creates a condition where teachers' attitude towards the students is eventually shared by the individual themselves. Teachers' perceptions and their biases, negative reinforcement, and low expectation of certain students, in turn affect students themselves who believe their teachers and accept that they do not have the necessary abilities, intelligence and skills to succeed in schools (Ferguson, 2003; Van den Bergh et al., 2010; Ready & Wright, 2011; Casad & Bryant, 2015; Johnston et al., 2019; Krischler & Pit-ten Cate, 2019).

Education research dealing with discriminatory practices has focused on teacher bias and prejudice in predicting students' academic performance (Van den Bergh et al., 2010; Ready & Wright, 2011; Thompson, 2019a). Martschenko (2018) argues that research suggests that 'teacher perceptions and expectations of a student, which can be preconceived, have an impact upon a child's **IQ scores, academic achievement, and attitudes and behaviour**'. This means that teacher's perceptions may play a significant role in categorizing children and can also have an impact on the likelihood of a child being referred for **gifted** or **special education**:

The **universal screening** of students for gifted education using IQ tests could help to identify children who otherwise would have gone unnoticed by parents and teachers. **Research has found** that those school districts which have implemented screening measures for all children using IQ tests have been able to identify more children from historically underrepresented groups to go into gifted education (Martschenko, 2018).

Similarly, Ready and Wright (2011) when exploring the links between teacher perceptions and children's socio-demographic backgrounds discovered that teachers perceive 'substantial racial-ethnic, socioeconomic, and gender differences' in children's literacy skills. Their research findings demonstrated that teachers, when dealing with lower-socioeconomic-status and lower-achieving contexts more often underestimated their students' abilities. Ready and Wright (2011) argued that teachers' subjective and biased understandings of their students' cognitive abilities have important implications for classroom interactions, children's access to resources and opportunities, and educational equity more broadly. Ready and Wright (2011) also discovered that teachers, who participated in the nationally representative data, perceived substantial racial-ethnic, socioeconomic, and gender differences in children's literacy skills.

Teacher bias and prejudice in predicting students' academic performance was also analyzed by Julia Thompson (2019b). Thompson, as an experienced classroom teacher, argues that teachers' expectations regarding the students' abilities can result in self-fulfilling prophecy:

The self-fulfilling prophecy begins with the expectations you have about your students. These expectations are your unconscious as well as your conscious attitudes about your students' ability to succeed. You constantly communicate those expectations to your students in many subtle ways such as through your body language, the assignments you make, the language you use, and how much time you spend with individual students (Thompson, 2019b, p. 82).

The Ideology of Meritocracy

Predicting students' academic performance, where teachers refer to intelligence and IQ tests and justifying the use of streaming by ability in performing schools, are not new. It reminds us of the power of meritocracy in schools and elsewhere. Michael Young coined the term 'meritocracy' in his influential satirical novel *The Rise of the Meritocracy 1870–2033* (Young, 1958). Young (1958) criticized the formula of IQ, effort and merit and argued that meritocracy would 'perpetuate inequalities'. By introducing the word meritocracy Young explored the consequences of a society in which each citizen's role and status was determined by the formula 'I.Q. + Effort = Merit'. Young's neologism, 'meritocracy', as suggested by Allen has since been transformed from a 'pejorative term to a positive ideal' (p. 367).

Young argued that meritocracy would only perpetuate inequalities, and to some extent his predictions were correct. Today, British inequalities in earnings are stark, both in comparison to other similar countries and when viewed against the conditions prevailing in Britain thirty years ago (Allen, p. 367).

Civil and Himsworth (2020) re-examined Young's book and argue that the concept has 'evolved and adapted, the language of meritocracy is one of the great survivors' in social history.

Young's text explores the consequences of a society in which each citizen's role and status is determined by the formula 'I.Q. + Effort = Merit'. The winners, believing they have earned their position amongst the elite, hoard greater status, power and rewards for themselves, crystallising into a rigid, repressive and distant ruling caste; the losers, labelled as 'stupid', are condemned to a life of drudgery, working as street cleaners or domestic servants for the elite.

Similarly, Smith (2017) suggested that the idea that people are judged on merit alone still remains a fiction. He refers to Toby Young, the son of Michael Young, who sees meritocracy as the new ethos adopted by today's ruling class:

He [Toby Young] believes it has been used to legitimise privilege as the outcome of individual talent, skill and effort rather than the result of birth or education. Young sees the contemporary economic landscape as embodying the situation described by his father's satirical 1958 account.

[Toby Young] sees meritocracy as exclusionary: 'The well-to-do have seized upon the trappings of meritocracy as a way of legitimising and perpetuating their privileged status' (quoted in Smith, 2017).

Using research data from behavioural genetics, and highlighting the 'over-emphasis on nurture in contemporary understandings of social mobility', Toby Young argues that Britain remains a 'mature meritocracy', because of its 'capacity to secure consent to the inevitable socio-economic inequalities generated by a free society' (quoted in Smith, 2017). Earlier, Tannock (2007) argued, that in addition to race, class and gender discrimination, there is a need to analyse the problem of the meritocratic education system, and 'education-based discrimination itself', promoting the dominant ideologies of meritocracy and human capital.

Discrimination, based on intelligence, ability, cultural identity, social class, ethnicity and gender, is a ubiquitous phenomenon in societies globally. Hence, there is an urgent need to understand and combat ethnocentrism, prejudice, discrimination, racism and other –isms, which contribute to a growing number of teachers' adverse attitudes towards certain students and their perceived abilities of students' performance in the classroom and beyond. If teachers are to act as true professionals and educators, in the moral and humane sense, they should not bring their pre-conceived ideas, biases, prejudice and discriminatory attitudes into the classroom—the public space. It is important that future professionals, who aspire to become empowering pedagogues, become aware of their own attitudes toward people who differ from themselves. Being aware is certainly necessary but not sufficient. Becoming aware is one thing, but acting on it, is another. Treating all learners in the same fashion, as if they are at the same stage of cognitive, social and emotional development (due to standardized teaching plans, lesson plans and curricular outcomes), results in discriminating against differences in developmental, cognitive, intellectual, emotional, cultural, and individual preferences and learning modality exhibited by students. Back in the 1980s, Dunn and Dunn (1987), with reference to individual differences and learning styles, argued, that teaching which is responsive to both learning styles and individual differences, 'may help improve learning conditions for students at risk of academic and lifelong failure' (Dunn & Dunn, 1987, p. 60).

Discriminatory attitudes are manifested in individuals' behaviour towards other people. Hence, discrimination is, undoubtedly, behaviour or acts based on bias and prejudice. Discrimination often begins in the classroom from day one. When teachers discriminate in the classroom in any one sense of the term, they are favouring the dominant and accepted ideology of knowledge, values, skills and learning and reject and ignore other multi-modal aspects of knowledge and learning and individuals' individual needs in general. Instead of inclusive classroom' they have created a *stratified* and divided classroom, based on privilege, favouritism, and exclusion (Derman-Sparks & Olsen, 1993; Gardner, 1999; Tannock, 2007; Slavin, 2018).

Empowering pedagogues, just like other ethically concerned professionals, need to examine their own attitudes, biases and either conscious or unconscious prejudicial assumptions, often based on ignorance, arrogance, phobias, and stereotypes, as to the nature of learning, ability, intelligence, gender, disability, speech patterns, physical appearance, personality, body, race, income, ethnicity, gender, religion, and life styles.

Learning Discrimination in the Classroom

Learners from diverse cultures, with different levels of knowledge, values and skills, and at different stages of cognitive, social and emotional development, are likely to exhibit different ways of learning. Yet, in a traditional classroom there is a

tendency to adopt a singular, unifying and one-dimensional approach to the learning/teaching process. There is also a tendency to normalise learning, using the normal curve, and by teaching to the 'average' students, which ignores individual and cultural differences. The learner's question 'Is this the right way?' already reflect the uncritical acceptance of learning in the classroom in a particular way dictated by a teacher.

Learning Styles

There are many theories of learning styles. The idea of individualized learning styles started in the 1970s and since then has been very popular in classroom pedagogy. Fleming and Mills (1992) suggested four modalities that described how individuals process and organise information: visual, auditory, reading-writing and kinaesthetic. Neil Fleming's (2005) VARK model was, at the time, one of the common and widely used frameworks. We can compare Fleming's model to Gardner's (1999) multiple intelligence theory.

Learning styles refer to a range of competing and contested theories that aim to account for differences in individuals' learning. Many theories share the proposition that humans can be classified according to their 'style' of learning, but differ in how the proposed styles should be defined, categorized and assessed. It is generally accepted that there are seven different learning styles. The term 'learning style' is used widely in education to refer to a range of '... habitual way in which some individuals process and organise information, at times based on their preferred learning style and that of an individual's style' (Dunn & Smith, 1990; Sadler-Smith, 2001; Fleming, 2005; Dunn et al., 2009; Atkinson, 2018).

Most cognitive psychologists agree that *cognitive learning styles* refer to the preferred way an individual processes information. Unlike individual differences in abilities (e.g., Gardner, 1999; Guilford, 1967; Sternberg, 2005; Malvik, 2020), which describe peak performance, styles describe a person's typical mode of thinking, remembering or problem solving. Furthermore, styles are usually considered to be bipolar dimensions whereas abilities are unipolar (ranging from zero to a maximum value). Having more of ability is usually considered beneficial while having a particular cognitive style simply denotes a tendency to behave in a certain manner. Cognitive style is usually described as a personality dimension, which influences attitudes, values, and social interaction.

We learn in diverse ways. How and what we learn is influenced and determined by a variety of factors and variables that can be grouped under affective, cognitive, psychomotor, intelligence, perception, social, cultural, and environmental domains.

In general, learning styles refer to how individuals acquire, process, organise, and maintain information. Whereas, learning modes describe the methods learners use to acquire, process, and maintain knowledge (Barbe & Milone, 1981; Dunn et al., 1991; Zajda, 2019a, b).

Learning Modality Discrimination

The modality preferences of learners cover *visual*, *auditory*, and *sensory* (touch) or tactile/kinaesthetic. Research shows, as expected, that most students are visual rather than auditory. Sebora (2008) wrote that numerous studies demonstrated that approximately 65 percent of the population are visual learners; 30 percent are auditory, and 5 percent are tactile learners, with again, most people being a combination of these learner styles. As Kussrow (2012) observed that some ‘30 percent of the population is auditory, 40 percent are visual, and 15 percent are tactile’ (Zajda, 2010a, p. 98; see also St. Louis, 2017). St. Louis (2017), like Sebora (2008) confirmed that approximately **65 percent** of the population are visual learners’, and around ‘**30 percent** of the population is made up of auditory learners’, who learn best through hearing:

While many of their classmates and co-workers struggle to get through a lengthy lecture, an auditory learner will soak up the information they hear and remember up to 75 percent (St. Louis, 2017).

Based on the above data, one can argue that we all learn via multiple sensory inputs. In addition, research findings demonstrate that one teaching style or modality does not meet all individual needs and learners should be taught in multi-modal and multi-sensory learning environments (Stoffers, 2011; Kharb et al., 2013; Al Sayyed Obaid, 2013; Crogman & Trebeau Crogman, 2016; Abdullah Alwaqassi, 2017). Kharb et al. (2013) for instance discovered that students’ the most common unimodal preference was ‘kinaesthetic, followed by visual, auditory and read and write’ and stressed that educators need to be aware of different learning styles:

One single approach to teaching does not work for every student or even for most of the students. The educators’ awareness of the various learning styles of the students and their efforts towards matching the teaching and learning styles may help in creating an effective learning environment for all the students (Kharb et al., 2013).

In addition, pedagogues need to be acutely aware of the ‘biological and developmental nature of other learner’s modalities’ (Zajda, 2008a, b, c, p. 98). Research has shown that the link between sensory abilities, in this case colour and sound discrimination, and general intelligence, or the *g* factor, is weak, suggesting that sensory abilities are quite distinct from general intelligence (Acton & Schroeder, 2001).

Intelligence Discrimination

Intelligence discrimination is possibly the most common discrimination in classrooms globally (Jacobs, 2019; Canning et al., 2019). It is based on the notion of differential intellectual abilities, where some abilities are favoured and other abilities, perceived to be not relevant, are not valued and completely ignored in the outcomes-driven academic achievement and performance in schools. If we define

the term ‘intelligence’ as ‘the ability to see relationships, and to use these relationships to solve problems’ (Fontana, 1995, p. 95) then it is easy to infer that every aspect of one’s learning is likely to be influenced by this definition of intelligence (see also Gardner, 1999; Frost, 2015).

Frost (2015) cautions us not to confuse intelligence with aptitude and performance. He explains further, that an IQ test is not used to select individuals for particular sectors:

I am not aware of the use of pure intelligence metrics (e.g. IQ) as a discriminating factor in selecting university or job candidates. Things like grades and performance on standardized tests like the SAT are used.

They are used because those variables are deemed to demonstrate past performance and past performance is viewed as a predictor of future performance. It’s not a perfect indicator - there are people that do well in high school and collapse under the new stresses and environment of university. There are also people that perform poorly in high school but mature and find their way when they get to university (Frost, 2015).

If we add to it the notions of high and low intelligence or gifted and below average, it is easy to see how these potentially damaging (but convenient tools for test administrators testing ability) labels can have significant implications for students, parents, and teachers alike, who use intelligence test scores for future career orientations. Martschenko (2018) argues that the debate concerning what it means to be ‘intelligent’ and whether ‘the IQ test is a robust tool of measurement’ continues to produce many conflicting responses from researchers, and adding to unresolved controversies surrounding the use of intelligence testing (Martschenko, 2018).

According to Jacobs (2019) teachers’ beliefs about the nature of intelligence among their students, affect minority students’ performance:

A new study suggests that students perform more poorly in classes taught by instructors who believe intelligence is fixed. Black and Latino students tend to [perform more poorly](#) than their white and Asian counterparts in math and science classes. It would be easy to assume this is partly based on the prejudices of professors, and [new research](#) suggests that’s a valid critique. But the problem it identifies isn’t overt racism. Rather, the issue is whether an instructor believes intelligence and ability are fixed or malleable (Jacobs, 2019).

Similarly, Canning et al. (2019), argue that teachers’ biased and preconceived ideas about their students’ intelligence affect students’ academic achievement:

Professors’ beliefs about the nature of intelligence are likely to shape the way they structure their courses, how they communicate with students, and how they encourage, or discourage, students’ persistence... We hypothesized that STEM professors’ fixed beliefs about intelligence and ability would lead URM students to experience lower motivation and to underperform relative to their non-stereotyped peers—a pattern consistent with stereotype threat theory. Classic studies that document stereotype threat underperformance effects typically manipulate threatening (versus nonthreatening) situational cues in the learning environment, such as an experimenter’s race/ethnicity/gender, and assess students’ intellectual performance as the primary indicator of stereotype threat (Canning et al., 2019)

Earlier, Vygotsky’s mistrust in the use of IQ tests to predict students’ future achievement inspired his development of socio-cultural learning theory (Chaiklin, 2003).

Students, defined by intelligence testing (known as ‘placements tests’ in schools) are, consequently, streamed by abilities. According to Chmielewski (2014), the practice of grouping students by ‘ability’ is ‘commonplace in school systems around the world and takes various forms’ (see also Boaler et al., 2000; Butler & Weir, 2013; Jacobs, 2019). For example, in one secondary college, located in Melbourne, the most able students in Year 9 were placed in advanced mathematics classes (level 1, which is the highest), the least able found themselves doing level 10 mathematics (the lowest group, covering basic mathematics).

Intelligence and IQ discrimination in schools is manifested in current practices of ‘tracking’ or ‘streaming’ by ability and education systems that have this as a common feature exhibit wide ranges of achievement outcomes. Intelligence discrimination is a convenient way of exercising power, domination and control over the student’s life in the classroom, and society at large. Intelligence testing, as an ideology of the academic achievement syndrome for installing the gate-keeping and for sorting out students (into high and low achievers, above and below average performers, the winners and losers), becomes a powerful tool, or a weapon of the hidden curriculum, legitimising meritocracy and educational inequality. Intelligence meritocracy creates a few winners and many losers in the classroom and later in life (Behar-Horenstein, 2003; Tannock, 2007).

Most parents accept, uncritically, the political correctness of the widely perceived and accepted ‘scientific objectivity’ of intelligence tests, even though psychologist themselves are aware of many misconceptions concerning the nature of intelligence and the reliability and validity of its measurements. Some individuals are likely to experience significant changes in their estimated IQ, due to cognitive, social and affective development, the nature of schooling, learning patterns, social and cultural differences and other environmental influences.

Race and Ethnicity Discrimination

Ethnocentrism, as a dominant ideology of cultural superiority over other cultures, is also present in racial discrimination in societies and educational systems. It is reminiscent of Nietzsche’s philosophy of the *Übermensch* (superman) and the *Untermensch* (inferior man), which based on racial superiority (see Nehamas, 1994).

Ethnocentrism refers to a tendency among individuals to view other people, and their cultural identities, from their own knowledge, values and cultural experience. In practice, ethnocentric attitudes are employed by individuals to judge other cultures through the lenses of their own culture. Bizumic and Duckitt (2012) argue that ethnocentrism can be reconceptualized as a ‘strong sense of ethnic group self-centeredness, which involves intergroup expressions of ethnic group preference, superiority, purity, and exploitativeness, and intragroup expressions of ethnic group cohesion and devotion’ (Bizumic & Duckitt, 2012, p. 887). This view of ethnocentrism indicates that some nations and people regard themselves as superior to others.

Ethnocentrism, as a practice of judging other cultures by one's own standards, and norms, is invariably difficult to overcome in the classroom. If we define ethnocentrism as a particular and preferential view of culture, and people, then we have created the majority/minority divide in the classroom. Ethnocentrism can range from an open intolerance of other people, based on their race, ethnicity, language, religion, and life styles, to dislike of people's looks, beliefs, attitudes, and values. Nelson (2002) reviewed unequal treatment and racial and ethnic disparities in health care in the USA, which is still current (Nelson, 2002, p. 668)

Racial and ethnic minorities tend to receive a lower quality of healthcare than non-minorities, even when access-related factors, such as patients' insurance status and income, are controlled. The sources of these disparities are complex, are rooted in historic and contemporary inequities, and involve many participants at several levels, including health systems, their administrative and bureaucratic processes, utilization managers, healthcare professionals, and patients... Minorities may experience a range of other barriers to accessing care, even when insured at the same level as whites, including barriers of language, geography, and cultural familiarity. Further, financial and institutional arrangements of health systems, as well as the legal, regulatory, and policy environment in which they operate, may have disparate and negative effects on minorities' ability to attain quality care (Nelson, 2002, p. 668).

Race continues to be a significant dimension of discrimination and inequality in schools, which affects students' mental health, performance and their academic achievement. Ferguson (2003) in his study of Afro-American students provided evidence how teachers' perceptions, expectations, and behaviours interact with students' beliefs, behaviours, and work habits, in ways that help to perpetuate the Black-White test score gap (Zajda, 2009a, p. xiii; Canning et al., 2019).

Van den Bergh et al. (2010) examined prejudiced attitudes of teachers. The authors assessed prejudiced attitudes of 41 elementary school teachers and concluded that it affected students' performance:

The implicit measure of teacher prejudiced attitudes, however, was found to explain differing ethnic achievement gap sizes across classrooms via teacher expectations (Van den Bergh et al., 2010).

Canning et al. (2019) argued that STEM faculty who believe ability is fixed have larger racial achievement gaps and inspire less student motivation in their classes. Zajda and Freeman (2009) examined race and ethnicity research globally and evaluated the interplay between state, ideology and current discourses of race, ethnicity and gender in the global culture. They discovered that race continued to be a significant dimension in higher education and academic achievement in the USA and elsewhere. In the USA, only one-quarter of community colleges can be considered racially integrated, where on average 37 percent of their students are from minority groups. One recent study by Goldrick-Rab and Kinsley (2013) reported that some 75 percent of the variation in 'racial composition in the two-year sector is directly attributable to the racial composition of their surrounding geographic locales':

The problems of those communities resulting from neighbourhood segregation and the concentration of poverty are simply transferred up the educational pipeline. Segregated com-

munity colleges with large shares of needy students not only receive fewer monetary resources, but they likely produce less student learning.

(<https://www.insidehighered.com/news/2013/05/28/consequences-racial-and-economic-stratification-community-colleges>).

Furthermore, Carnevale (2013) argued that U.S. higher education is ‘colour blind’ in theory; it ‘in fact operates, at least in part, as a systematic barrier to opportunity for many African-Americans and Hispanics’. He demonstrated that since the mid-1990s, student enrolment in American higher education has grown increasingly stratified along racial lines with White students overwhelmingly populating the ‘468 most well-funded, selective four-year colleges and universities while African-American and Hispanic students were more and more concentrated in the 3,250 least well-funded, open-access, two- and four-year colleges’ (<http://diverseeducation.com/article/54956/>).

Hence a better and more meaningful understanding and research-informed knowledge of race and racialisations in education are needed in order to perceive the real experiences of minority groups in educational systems, as they negotiate inequitable and discriminatory social and cultural conditions in increasingly stratified societies (see Baker et al., 2000; Rezai-Rashti & Solomon, 2008). Gosa and Alexander (2007) demonstrated how the dimension of race still matters in schooling and success. They argued that racial discrimination affects both working-class and middle-class African Americans. Well-off African American children, in general, were not as successful in academic achievement as white American students:

While the educational difficulties of poor black students are well-documented and have been discussed extensively, the academic performance of well-off African American children has received much less attention. However, despite economic and educational resources in the home, well-off African American youth are not succeeding in school at the levels of their white peers (Gosa & Alexander, 2007):

A review of relevant literature identifies a set of social processes that pose formidable barriers to the academic and personal development of middle-class African American youth, the closing of the black-white achievement gap, and the preservation of African American family advantage across generations. Constituting a social ecology of African American family life, these processes emanate outward from the immediate home environment, through peers and friends, into neighborhoods and schools, and to society at large (Gosa & Alexander, 2007, p. 285).

Earlier, Freeman (2006) in attempting to explain under-achievement of black children in schools, argued that this was due to the process of cultural assimilation and the loss of social identity (Freeman, 2006, p. 51).

By examining the socialisation process in schools, assimilation, prejudice and stereotypes, one could argue that the schools’ ethos and classroom environment contribute to black children’s low self-esteem, low motivation and lack of desire and interest in maximising their educational and human potential (see also Briggs, 2014). Some researchers have demonstrated that the relationship between self-esteem and student outcomes is limited, at best. Hansford and Hattie (1982) demonstrated in their meta-analysis of 128 research studies that the average correlation

was in the range of .21 to .26, which means that differences in self-esteem can account for only about 4 to 7 per cent of variation in academic performance. These studies represented a total sample of 202,823 persons and produced a data base of 1136 correlations between self-ratings and performance measures. A range in the relationship of .77 to .96 was reported with an 'average' correlation of .21.

Since African Americans lagged behind Whites in college attendance, they lacked 'access to many of the necessary skills that higher education provides' (Freeman, 2006, p. 48). Gosa and Alexander (2007) suggested that cultural capital, education, income, and other SES indicators were insufficient to explain these differences in academic achievement. Instead, it may well be that the perception of race itself in the society is the real issue. One could argue that individuals can be self-discriminatory, in terms of how they perceive themselves: identity, abilities, self-esteem, self-efficacy, and achievement. Both whites and non-whites have constructed and internalised their racial identities:

[T]he race at issue is a social construction, imbued with meaning through its particular history and current place in the social fabric. The liabilities that prevent black parents from passing on advantages to their children are racial, in the sense that they follow from the contemporary and historic social ecology of race. Closing the black-white education gap, and keeping it closed, necessarily will involve strategies that acknowledge and address the continuing significance of race ... differences in school quality, segregative patterns *within* schools, and teacher relationships intersect to hinder the academic development of better off black youth. Consequently, the family background advantages that middle-class whites enjoy in positive schooling outcomes are not realized to the same extent by middle-class blacks. (Gosa & Alexander, 2007).

Rezai-Rashti and Solomon (2008) have examined racial identity models and the notion of racial identity in social settings. Their findings indicated that 'people of colour' have 'different orientations, understandings and experience of race, racism and race privilege' in institutional settings (p. 184).

I have argued previously that there is a need to reassert the relevance of intercultural dialogue in an increasingly interdependent world of globalisation and social change, to address ethnic and racial discrimination in education both locally and globally (Zajda, 2009a, b, c, d, e, f). Discussions surrounding race, ethnicity and gender in education need to reflect a cross-cultural perspective. Discourses surrounding other cultures, nation-building and identity politics can often lead us to identify and question beliefs, language, and assumptions that are taken for granted, by making the familiar strange and the strange familiar, and questioning the 'universality' of our beliefs and assumptions. It is not enough to depict cultural differences in intercultural research, and there is now a need to rediscover to what degree such cultural differences can be 'generalised' across cultures. The issues to be addressed in future research should include: What kinds of roles do our perceptions concerning identity (in this case perceptions of race, ethnicity and gender) and the nation state play in intercultural dialogue and conflict analysis, and the relationship between globalisation, social change and emerging cultural values.

Self-Fulfilling Prophecy and Key Principles

Self-fulfilling prophecy (SFP) is a phenomenon by which people's expectations about the future events lead them to behave in ways that, on occasion, can cause the expected event to occur. SFP describes situations in which teachers' expectations and acts influence their own attitudes and behaviour as well as their students' behaviour. Self-fulfilling prophecy is a concept developed by Robert K. Merton to explain how a belief or expectation, whether correct or incorrect, affects the outcome of a situation, or the way a person (or group) will behave. A self-fulfilling prophecy occurs when a perceiver's false belief leads to its own fulfillment (Merton, 1948). Merton emphasized the role that self-fulfilling prophecies play in injustice and inequality, and research has documented the occurrence of self-fulfilling prophecies. For example, labeling someone as a low achiever, and treating that person as such, may foster low achieving behaviour in the person, who is subjected to the expectation (Brophy, 1983; Madon et al., 1997; Gentrup et al., 2019). Madon et al. (1997) examined the power of self-fulfilling prophecy and discovered that teacher perceptions predicted achievement more strongly for low achievers than for high achievers (see also Workman, 2012; Teacher expectations of students a self-fulfilling prophecy?, 2018).

Workman (2012) also argued that teachers are the single most important factor that affects student academic achievement:

As a result, over the last decade state leaders have taken aim at increasing educator effectiveness, including requiring the implementation of new teacher evaluation systems. A growing body of research suggests that the expectations a teacher sets for an individual student can significantly affect the student's performance. Teacher expectations can, for example, be based on student characteristics such as race, ethnicity, and family income level, or indicators of past performance. These expectations can cause teachers to differentiate their behavior towards individual students (Workman, 2012, <https://eric.ed.gov/?id=ED539026>).

Singhal (2018) argued that what individuals believe about themselves becomes a self-fulfilling prophecy. Gentrup et al., 2019 investigated the relationship between teacher expectations and student learning, based on longitudinal data from 64 classrooms and 1026 first-grade students in Germany, as well as a subsample of 19 classrooms with 354 students. The authors analyzed the mediating role of three characteristics of teacher feedback rated in video-recorded school lessons. The results demonstrated that teacher expectations were 'inaccurate to some extent'

...they did not entirely agree with students' current achievement, general cognitive abilities and motivations. In addition, this inaccuracy in teacher expectations significantly predicted students' end-of-year achievement, even after prior achievement, general cognitive abilities, motivation, and student background characteristics were considered (Gentrup et al. (2019).

Gentrup et al. (2019) research findings, based on a large sample, showed that teachers' expectations, which were biased and 'inaccurate' affected their students' academic performance.

The concept of the self-fulfilling prophecy can be summarized by the following key stages:

1. We form certain expectations of people or events.
2. We communicate those expectations with various cues.
3. Individuals tend to respond to these cues by adjusting their behaviour to match them.
4. The result is that the original expectation becomes true.

These four stages create a cycle of self-fulfilling prophecies. Earlier, Good & Brophy (1998) argued that teachers' expectations can be self-sustaining. Expectations in themselves cause teachers to be alert for what they expect and less likely to notice what they do not expect. Some expectations persist, even when they do not coincide with the facts (see also Smith et al., 1999; Van den Bergh et al., 2010). Good & Brophy (1998) developed the following 5-stage model of SFP:

1. The teacher expects 'X' to take place in the classroom (relating to academic achievement and performance)
2. In view of this expectations (true or false), the teacher behaves differently towards different students.
3. This tells each student what behaviour and achievement the teacher expects.
4. If the teacher's treatment is consistent over time, and if the student does not actively resist or change it in some way, it is likely to shape the student's performance (high achievers will remain high achievers, and low achievers will accept the failure syndrome).
5. With time, the student's achievement and behaviour conforms more and more closely with the teacher's original expectations (hence the teacher will think "Yes, I was right, Emma is...").

Research findings suggest that there are *two* types of self-fulfilling prophecies. One type is the *Pygmalion effect*, and the other type is a self-fulfilling prophecy, due to students' own perception of their abilities. The Pygmalion effect is a positive self-fulfilling prophecy, when teachers believe that certain students will perform well. These two self-fulfilling prophecies are discussed below.

The Pygmalion Effects

It occurs when one person has a positive perception and expectations of another and treats that person in a manner consistent with those expectations. As a result, the person changes his/her behaviour, which results in the self-fulfilling prophecy (SFP). In the classroom teachers may treat certain students in a positive manner, consistent with their perceptions and expectations, which are transferred to these students. If a teacher has a positive expectation or perception of the student, the teacher conveys that message both verbally and non-verbally, using non-verbal

cues (NVCs) to the student. The positive expectations are likely to influence and change the student's perception and expectation and create a self-fulfilling prophecy. Wehler (2017), when examining the negative self-fulfilling prophecy cycle argues that self-fulfilling prophecies are 'usually negative, but they do not have be':

Perhaps the most obvious way to help students recognize and disrupt a negative self-fulfilling prophecy cycle is to make them aware of it. We would like our attempts to encourage metacognition and to quietly empower them from behind the scenes to be successful, but sometimes a direct approach is the most effective (Wehler, 2017).

Example of a Positive Self-Fulfilling Prophecy

Back in 1968, in a classic experiment, Rosenthal, a professor of social psychology at Harvard, and Jacobson worked with elementary school children from 18 classrooms. They randomly chose 20% of the children from each room and told the teachers they were 'intellectual bloomers' (a positive self-fulfilling prophecy). Apparently, the bloomers had done what was expected of them and the teachers were comfortable with them. Students gained more IQ than the other 80%, who the teachers believed to be 'average' (see Postman & Weingartner, 1971). Consequently, Rosenthal & Jacobson argued that the teachers had passed on their higher expectations to students which had produced a self-fulfilling prophecy (Rosenthal & Jacobson, 1968). This experiment illustrated several assumptions within the 5-stage model of SFP:

1. High expectations lead to higher performance
2. Low expectations lead to lower performance
3. Better performance resulting from high expectations leads us to like someone more
4. Lower performance resulting from low expectations leads us to like someone less
5. Forming expectations is natural and unavoidable.

Rosenthal and Jacobson (1968) study was the beginning of research to follow on teachers' stereotypes in the classroom.

Teachers' belief in their students' academic skills and potential is 'a vital ingredient for student success' because it is linked to students' beliefs about how far they will progress in school, their attitudes toward school, and their academic achievement...When teachers underestimate their students, it affects not just that one student-teacher relationship but the student's entire self-concept as well as more tangible measures like their GPA (Austin, 2018).

The self-fulfilling prophecy principle is still the same, whether they refer to teachers' discriminatory practices concerning students' ability, intelligence, academic achievement, gender or race. Teachers may have higher expectations for some of their students and lower expectations for others, resulting in the self-fulfilling prophecy.

Self-Fulfilling Prophecy in Life

Self-fulfilling prophecy occurs when a perception or prophecy (prediction) is made and individuals autonomously change their behaviour to conform to the prediction. In *My Fair Lady*, the musical, Eliza Doolittle, a flower girl, who has a distinct Cockney accent, decides to have speech lessons from Professor Henry Higgins, a noted phoneticist and a speech therapist, in order to acquire the highly desirable upper class accent, and to improve her social standing, and her position in society and be accepted as a high-class lady. Individuals, like Eliza Doolittle, act because of their own perceptions, and those of others.

Another and a more current example of this is, when the school, which successfully markets its image, as a performing school, a centre of high achievers and excellence, enrolls like-minded students and supported by parents. Such targeted students come to the school with a set of preconceived ideas concerning standards, and high academic achievement, and behave, in a manner, that may well turn them into high achievers. They acted in this way, because of their own self-image, identity, beliefs, and expectations. Students already had high expectations, when enrolling at such a high-performing school.

Research has shown that SFPs do exist, regardless of whether the prophecies are true or false. There has been a great deal of research regarding the correlation between teacher expectations of students, and students' resultant academic performance. They indicate the existence of a positive correlation between teacher's level of expectation for students' academic achievement and students' performance outcomes.

The perception that a given student will perform well or poorly, will be true if expectations are transferred from the teacher to the student. Consciously, or not, we tip individuals off, as to what our expectations are (see Postman & Weingartner, 1971, Good & Brophy, 1998). As part of non-verbal communication (NVC), we exhibit thousands of cues, some as subtle as the tilting of heads, facial expression, posture, gaze, eye contact, gestures, and the way we smile, and the raising of eyebrows. These cues are part of the impression management, or behavior of which we are aware that students will see and evaluate our words and action. Students invariably pick up on those cues, and react accordingly.

How Teachers Communicate Expectations

Here are examples how some teachers display their bias, when communicating their expectations regarding classroom dynamics and academic performance:

- Seating low expectation students (LES) far from the teacher and/or seating them in a group
- Paying less attention to LES in academic situations (smiling less often, maintaining less eye contact, etc.)

- Calling on lows less often to answer questions or to make public demonstrations
- Waiting less time for lows to answer questions Not staying with lows in failure situations (e.g. providing fewer clues, asking fewer follow-up questions)
- Criticizing lows more frequently than highs for incorrect responses
- Praising lows less frequently than highs after successful responses
- Praising lows more frequently than highs for marginal or inadequate responses
- Providing lows with less accurate and less detailed feedback than highs
- Failing to provide lows with feedback about their responses as often as highs
- Demanding less work and effort from lows than from highs Interrupting lows more frequently than highs.
- Interrupting lows more frequently than highs.

As Susan Graziano (2017), suggested, when explaining discriminatory practices in education, and finding solutions, that often, teachers' discrimination and discriminatory practices in schools are 'indirect and unintentional':

Not only is discrimination a practice that goes against the mission of any school, it is expressly illegal. However, teachers and educational leaders must be very careful in evaluating programs, rules, policies, and procedures within the school district. School professionals should always be looking for any potential indirect discriminatory practices. In the case of discrimination, intent does not matter. The impact on the victims of discriminatory practices matters (Graziano, 2017).

Discrimination in the classroom is communicated and reinforced by some teachers' pre-conceived biases concerning their students' potential academic performance, and which are communicated by their verbal and non-verbal communication. To overcome discrimination in the classroom, there is a need to implement and practice inclusive and engaging pedagogy, based on non-discriminatory teaching. Howarth and Andreouli (2015), proposed a social psychological framework for studying the role of schools in promoting cultural diversity, positive intercultural relations, and reducing discrimination (see also Howarth, 2002; Howarth, 2004; Zajda & Majhanovich, 2021). Students in schools with an effective and constructive approach to cultural diversity benefit from 'enhanced learning, higher educational and occupational aspirations' (Howarth & Andreouli, 2015).

Zafar (2021) suggests that the first step towards reducing discrimination in schools is 'teaching students self-awareness and self-reflection':

They need to understand how our race, ethnicity, socio-economic status, gender, and all the other non-changeable characteristics affect us individually... Unfortunately, discrimination is still very common in all areas of life and all fields of business. However, it always starts at an early age. This is why the only way to reduce it – and eventually prevent it – is through education (Zafar, 2021).

Jussim and Harber (2005) argued that 35 years of empirical research on teacher expectations justifies the following conclusions: (a) 'Self-fulfilling prophecies in the classroom do occur, but these effects are typically small, they do not accumulate greatly across perceivers or over time, and they may be more likely to dissipate than accumulate; (b) powerful self-fulfilling prophecies may selectively occur among

students from stigmatized social groups; (c) whether self-fulfilling prophecies affect intelligence, and whether they in general do more harm than good, remains unclear, and (d) teacher expectations may predict student outcomes more because these expectations are accurate than because they are self-fulfilling' (Jussim & Harber, 2005).

Howarth and Andreouli (2015), on the other hand, argued that the negative impact of 'stigma and discrimination on young people has been largely documented' (Howarth & Andreouli, 2015, p. 2), resulting in students' academic disengagement, lower academic achievement and negative perceptions of their self-worth, self-esteem, self-efficacy, and identity. The term 'stigma' was originally researched extensively by Goffman (1963). He stated that that stigma was 'an attribute that is deeply discrediting, which reduces someone 'from a whole and usual person to a tainted, discounted one' (Goffman, 1963, p. 3). Link and Phelan (2001) re- defined stigma as the 'co-occurrence of its components-labelling, stereotyping, separation, status loss, and discrimination-and further indicate that for stigmatization to occur, power must be exercised' (Link & Phelan, 2001, p. 363). All this demonstrates that labelling, and stereotyping students' potential academic performance in the classroom results in a powerful and painful stigma, affecting students' self-esteem, identity and mental health. An example of this is an endemic caste-related discrimination of students at Indian universities and across the world:

Today we take a look at the alarming practice of caste-related discrimination at Indian universities – which is now being found at higher education institutions across the world as Indian students travel more widely (*Times Higher Education*, 8 January, 2021).

As the above research demonstrates, discrimination, on the basis of intelligence, the IQ, race, ethnicity, gender, social class, and other factors may have legal and ethical consequences for both individuals and institutions, deemed to be breaking human rights laws and anti-discrimination acts.

Conclusion

Students are likely to learn various forms of discrimination in the classroom and outside. Intelligence and ability discrimination, with reference to students' learning and assessment, tend to be common in schools globally. This is largely due to performance-based culture in schools and academic assessment-driven curriculum (Zajda, 2020a). It may result, in some cases, as demonstrated above, in students' anxiety, stress, mental health issues, and negative SFP outcomes, especially, when teachers' own biased expectations influence their attitudes and behaviour, which is communicated to their students. We must resist any attempts at labelling, categorising and dividing individuals into categories of performing or underperforming. Such discriminatory attitudes, behaviours, and practices displayed by some teachers are damaging to students' identity and self-esteem and are likely to contribute to students' achievement anxiety, and depression, affecting their mental health.

Labeling students in term of their potential academic achievement and performance serves to legitimise a very conservative ideology of *meritocracy*, where students are judged by abilities, intelligence, effort, and achievement only, so dramatically illustrated in the sci-fi novel *Brave New World*, where citizens in a futuristic society have been classified into alphas (top citizens who have the best of everything), betas (second best) and epsilons (working slaves). In addition, these labels and stereotypes undermine the whole concept of holistic, inclusive and democratic schooling, based on equality, human rights and social justice. Progressive and inspirational teachers should offer unconditional positive regard to all students they teach. Teachers have the power, knowledge and skills to create an effective motivational atmosphere. Genuine empowering pedagogues, who wish to implement excellence and quality learning need to monitor and control their own biases and discriminatory attitudes, to promote equality of educational opportunity and quality outcomes for all.

Chapter 5

Current Research of Theories and Models of Intelligence Globally



Introduction to the Research on Intelligence Theories and Models

One of the key factors affecting students' learning and performance, as well as the nature of effective learning environments globally is the ubiquitous use of intelligence testing in schools, and elsewhere to determine specific abilities, including giftedness and *identify* intellectual disabilities. In schools, intelligence testing is used to award scholarships in private schools and to stream students by abilities. Competing discourses on the nature of intelligence and intelligence testing demonstrate the on-going unresolved controversies surrounding conceptualization of intelligence and intelligence testing in society, especially its continuing use to measure a person's cognitive ability and performance. Created more than a century ago, the intelligence tests are still widely used to measure performance on specific tasks, and especially predicting potential academic achievement in schools. The nature of intelligence testing in schools and its controversial effects on students' academic achievement, and their mental health, plays a significant part in education policy reforms, aiming at creating more equitable learning environments.

Globally, there is a great deal of research on intelligence testing and the effects of intelligence on academic achievement. The association between intelligence and academic achievement has been well established (Gottfredson, 1997; Grigorenko & Sternberg, 1998; Benson, 2003; Evers, 2012; Clevenger, 2013; Lopes Soares et al., 2015; Ýavojová & Ballová Mikušková, 2015; Hurks & Bakker, 2016; Zajda, 2019a; Sánchez-Álvarez et al., 2020). There is also a consensus that general intelligence (or *g* factor) predicts academic achievements in schools. Earlier, (Gottfredson (1997) already demonstrated how the 'advantages of higher *g*, even when they are small, cumulate to affect the overall life chances of individuals at different ranges of the IQ bell curve' (Gottfredson, 1997, p. 79). Deary and Johnson (2010), in their study of intelligence and education, stated that there is a need for 'greater clarity in

stating underlying assumptions and developing analytical approaches and greater objectivity in interpreting results’.

...researchers assume that genetically influenced intelligence drives educational attainment, and think that intelligence is the appropriate control variable. Researchers’ different and often unstated causal assumptions can lead to very different analytical approaches and thus to very different results and interpretations (Deary & Johnson, 2010).

Since different interpretations of research findings, based on different applications of research modelling concerning the intelligence and academic achievement may lead to different conclusions, one needs to be aware of these flaws in research methodologies and interpretations of research data.

Background into g-Centric Theories of Intelligence

There are a number of major and competing in complexity theories of intelligence in existence, ranging from g-centric, to Cattell (1987) and Gardner (1983) theory of multiple intelligences. To begin with, between 1927 and 1980, several major and influential g-centric theories dominated intelligence theory and research. The *g* factor, also known as general intelligence, is a construct developed in psychometric research, dealing with specific cognitive abilities, and academic achievement, measured mainly by performance on tests. General intelligence (*g*) was first proposed by Spearman, (1904; 1927). The *g* factor defined individual differences in mental abilities. The first modern measure of intelligence was that of the French psychologist Alfred Binet and his co-researcher Theodore Simon in 1904/5, who were engaged by the Education Department in Paris to identify bright and ‘feeble-minded’ children, who could not be educated in normal schools and who needed help. This standardized test was used to [identify learning-impaired Parisian children](#) in the early 1900s.

Since then, it was used identify children with special needs:

...it has become one of the primary tools for identifying children with mental retardation and learning disabilities. It has helped the U.S. military place its new recruits in positions that suit their skills and abilities (Benson, 2003).

As Benson (2003) noted, intelligence testing was ‘unfairly stratifying test-takers by race, gender, class and [culture](#)’ and ignoring other attributes of intelligence, such as creativity:

...minimizing the importance of creativity, character and practical know-how; and of propagating the idea that people are born with an unchangeable endowment of intellectual potential that determines their success in life.

As a result, many of the biases identified by critics of intelligence testing have been reduced, and [new tests are available](#) that, unlike traditional intelligence tests, are based on modern theories of brain function (Benson, 2003).

Current developments in intelligence research involve the formation of more complex and diverse intelligence theories. Also, there is a corresponding trend to

de-emphasise the use of standardized testing to measure intelligence. With the emergence of sophisticated genetic and neurological research methodologies, inspired by a ground-breaking discovery of the sequence of the human genome, new perspectives and dimensions on the conceptualising and measurement of the complexities of intelligence are being tested and developed.

Genome Research

Genome research has become the first step in understanding how the instructions coded in DNA affect cognitive processes in the individual. The United States Human Genome Project (1990) was a worldwide research effort that had the goal of analyzing the structure of human DNA and determining the location of genes. The *Human Genome Project* (HGP) was an international 13-year effort, 1990 to 2003. Primary goal was to locate the complete sequence of DNA bases in the human genome. As a result, the Human Genome Project (2016) has revealed that there are probably about 22,300 human genes (and not the estimated 100,000 human genes in the 1980s). Genome research was made possible by an earlier discovery of the double helix structure of the DNA molecule (in the form of a three-dimensional double helix) in 1953 by Francis Crick and James Watson. These significant discoveries of the structure of human genes have made it possible to research further a complex interaction between cognitive, environmental, biological, and psychological aspects of intelligence and genetics. In fact, the ‘father’ of this approach, where genetic and environmental variables were studied together, was Hans Eysenck (Eysenck, 1966, 1973, 1979, 1998). He defined, tested, and popularised his original and, at the time controversial theory, that general intelligence (g) was a biological phenomenon, with broad social consequences (see also Corr, 2016; Gottfredson, 2016). Recent research has demonstrated that there are shared genetic influences, as predicted by Eysenck in the 1980s, Jensen and others (Hagenaars et al., 2016).

Major Models of Intelligence

During the last decade, in view of numerous theories and models circulating, attempts have been made by researchers to combine and synthesise competing models of intelligence into a more manageable group. Michael Gardner (2012), for instance, grouped intelligence theories into **four** major theory types: (1) psychometric theories; (2) cognitive; (3) cognitive-contextual; and (4) biological theories.

Gardner argued that *psychometric theories* of intelligence focused on individual differences specifically in academic achievement on cognitive tests. Overall, the psychometric theories researched both the structure of human intelligence, and the importance of general intelligence.

By contrast, *cognitive theories* of intelligence focused on specific mental operations and various processes involved in performance. These processes, according to Gardner, ranged from ‘the very simple (e.g., inspection time) to the fairly complex (e.g., working memory)’, processing speed etc.

Cognitive-contextual theories of intelligence emphasized mental processes that demonstrated intelligence operating within a socio-cultural context. Such theories included Vygotsky’s socio-cultural theory, Sternberg’s triarchic theory, Gardner’s theory of multiple intelligences, and Piaget’s theory of development.

Biological theories of intelligence covered the relationship between intelligence, and the brain and its functions. Gardner noted that although ‘numerous relationships have been found, but none have been elaborated into a detailed theory of the neuropsychology of intelligence’ (Gardner, 2012). In addition, Davidson and Kemp (2012) analysed the emerging three hierarchical models of intelligence, namely the extended theory of fluid and crystallized intelligence (*Gf-Gc* theory), three-stratum theory, and the Cattell-Horn-Carroll (CHC) Theory of Cognitive Abilities. Furthermore, they combined both theories into the third one, called Extended *Gf-Gc* Theory. The original *Gf-Gc* theory, according to Davidson and Kemp (2012), received its name when Raymond Cattell (1987) divided Spearman’s factor of general intelligence into two broad, independent spheres:

fluid intelligence (*Gf*) and crystallized intelligence (*Gc*). The purpose of this separation was to account for individuals’ cognitive development in adolescence and adulthood. *Gf* involves mentally working well with novel information and it is dependent on the efficient functioning of the central nervous system. In contrast, *Gc* is dependent on education and other forms of acculturation. *Gc* consists of the set of skills and information that individuals acquire and retain in memory throughout their lives. Cattell proposed that *Gf* is derived from genetic and biological effects, while *Gc* primarily reflects environmental influences, such as amount of education and socioeconomic status (Davidson & Kemp, 2012).

According to the extended *Gf-Gc* theory of intelligence, as Davidson and Kemp (2012) explain, adults often channel their knowledge and intellectual abilities into specific areas of expertise. Davidson and Kemp (2012), also point out, which is important, that the current emphasis on adaptability ‘means that most contemporary models view intelligence as dynamic in nature’. They acknowledge that intelligent behaviours and neural connections often change when environmental conditions change, which explains why human intellectual performance can be high in some contexts and low in others. Through their dynamic focus, the models advance the field of intelligence beyond a narrow, static conception of intelligence. As a result, interactive assessment of cognitive abilities has become more common, and new environmental programs are designed to foster a dynamic notion of intelligence.

Another commonality among some of the models of intelligence is the view that intelligence is the ongoing development of expertise in one or more domains. For example, extended *Gf-Gc* theory of intelligence, Sternberg’s theory of developing expertise (or the development of knowledge-based expertise in all children through practice) and Anderson’s theory of the minimal cognitive architecture, underlying intelligence and cognitive development (theory that consists of multiple modules but also explains how these modules are integrated to produce coherent cognition)

have mechanisms for deliberate practice and the continual refinement of abilities. Similarly, the potential for expertise is a criterion for the domains in Gardner's theory of multiple intelligences. Unlike Sternberg's intelligence test, traditional intelligence tests measure very few expertise-related abilities.

Davidson and Kemp (2012) conclude that the 'psychometric, physiological, and social levels and their current models have headed the field of intelligence down three productive paths. Perhaps the time has come for these paths to converge into one' (Davidson & Kemp, 2012).

Intelligence Defined and Constructed

Back in 1869, Sir Francis Galton wrote that 'man's natural (intellectual) abilities are derived by inheritance, under exactly the same limitations as are the form and physical features of the whole organic world' (Galton, 1869/1892/1962). Since the 1920s there has been a considerable controversy over defining intelligence. When a group of psychologists met in 1921 and again in 1986 to discuss understandings of intelligence, and everyone had a different idea. On both occasions, half of the group mentioned higher-level of thinking processes as defining features of intelligence, such as abstract reasoning and problem-solving in their definition of intelligence. The 1986 group also added metacognition and executive cognitive processes, the interaction of knowledge with mental processes, and the cultural context, as defining elements of intelligence. However, the psychologists from both groups disagreed about the structure of intelligence—whether it was a single ability or many abilities (Sternberg, 2005). According to Sternberg (2005, p. 189), conventional views of intelligence favour individuals who are strong in memory and analytical abilities (e.g., Cattell, 1987; Carroll, 1993; Eysenck, 1982; Eysenck, 1998; Jensen, 1983; Jensen, 1998). In 2014, psychologist W. Joel Schneider, when interviewed by Kaufman (2014) was asked to define intelligence. Schneider suggested that, due to many inconsistencies, the term should remain 'ambiguous':

However, the inconsistencies in the various definitions are real and thus require that the term *intelligence* remain ambiguous so that it meets the needs of the folk who use it (cited in Kaufman, 2014).

The modern concept of 'intelligence' has different meaning for different individuals across cultures, time and countries. As such, it has several ideological, educational, vocational and pedagogical implications. According to a traditional definition, intelligence is *a uniform cognitive capacity people are born with* (Anderson, 1999). Anderson (1999) argued that the 'classical view' of intelligence was derived from psychometric tests. Sternberg (2017), defined intelligence as 'mental quality that consists of the abilities to learn from experience, adapt to new situations, understand and handle abstract concepts, and use knowledge to manipulate one's **environment**' (Sternberg, 2019). More recently, there exists a consensus among psychologists and researchers that the key idea in defining intelligence is the

individual's *adaptation* to the environment. The use of adaptation in the classroom settings refers to the student's motivation to learn and master the material, in order to perform well in tests.

Effective adaptation, according to Sternberg (2019) draws upon a number of cognitive processes, such as perception, memory, reasoning, learning, and problem solving.

The main emphasis in a definition of intelligence, then, is that it is not a cognitive or mental process per se but rather a selective combination of these processes that is purposively directed toward effective adaptation (Sternberg, 2019).

Slavin (2018), on the other hand, argues that experts do not share a consensus on the precise meaning of intelligence. They do agree, however, that intelligence is the ability to deal with abstractions, to solve problems, and to learn new knowledge, skills, and values.

There appears to be some consensus among educational psychologists that intelligence is 'Ability or abilities to acquire and use knowledge for solving problems and adapting to the world' (Margetts & Woolfolk, 2019 p. 168). By contrast, Duchesne and McMaugh (2020) define intelligence as a 'general aptitude and capacity for understanding and learning' (Duchesne & McMaugh, 2020, p. 385; see also Zajda & Zajda, 2013). According to Howard Gardner (1983), intelligence refers to *the human ability to solve problems or to make something that is valued in one or more cultures* (Gardner, 1983/2003, p. x). Gardner, who popularised the multiple intelligences model, also believes that intelligence is also the ability to create an effective product or offer a service that is valued in a culture; a set of skills that make it possible for a person to solve problems in life; and the potential for finding or creating solutions for problems, which involves gathering new knowledge. However, Davidson and Kemp (2012) argued that even though the concept of intelligence had existed for centuries, there is still 'little consensus' on exactly what it means for someone to be intelligent or for one person to be more intelligent than another:

Oddly enough, the heterogeneity among views of intelligence seems to have increased over time rather than decreased (Stanovich, 2009). This lack of agreement fuels unresolved controversies, such as whether intelligence is comprised of one main component or many, and it results in claims that intelligence is too imprecise a term to be useful (Jensen, 1998). A related mystery is why the field has generated relatively few new models of intelligence in the past 20 years. Is this scarcity due to a perceived futility? Will it eventually result in the field's demise? Or has scientific progress been sufficient enough to make the pursuit of new directions unnecessary? (Davidson & Kemp, 2012).

Traditional Models of Intelligence

There are several competing models of intelligence, ranging from the Stanford-Binet Scale that measures five areas of abilities, to multiple intelligences (MI) models. I am adapting Gardner's (2012) typology of four major theory types, but focusing on the analysis of psychometric theories and cognitive-contextual theories of intelligence.

Psychometric Theories of Intelligence

Here we can include Spearman (1927) and his concept of intelligence, based on a general mental ability, or ‘g’, and which dominated psychometric theories. The origins of the Stanford-Binet Intelligence Scale, go back to 1905, when Alfred Binet, and Theodore Simon, who believed intelligence to be a ‘learned entity’, invented the Binet-Simon Scale. It became the first accepted IQ test. This instrument was designed to measure intelligence among children aged 3 to 12. In 1916, this updated version of the intelligence scale was developed to measure more effectively cognitive and intellectual ability while also helping educators and clinicians diagnose learning disabilities, giftedness, and mental retardation. In general, psychometric theories of intelligence are based on a model that defines and describes intelligence as a composite of abilities measured by intelligence tests.

The Stanford-Binet Intelligence Scale looks at several levels of cognitive ability in children, adolescents, and adults. Earlier, Binet produced a single common indicator, called *intelligence quotient* (IQ), which led to the notion of *mental age* (MA) versus chronological age. A 6-year old child whose performance on a given intelligence test is that of a 10-year old has a mental age of a 10-year-old. As, Martschenko (2018), writes ‘Ironically, Binet actually thought that IQ tests were **inadequate measures** for intelligence.’ Binet noted the test’s inability to measure other dimensions of intelligence, such as creativity or emotional intelligence (see Matthews et al., 2004). Binet’s concept of MA was developed further by the American psychologist Lewis Terman (University of Stanford) in 1916, which led to the construct of *intelligence quotient* (IQ), or the ratio of mental age (MA) to chronological age. Thus, a 5-year old child with a mental age of ten would have an IQ of $10/5 \times 100 = 200$ (or a genius). The Stanford-Binet Scale, which was revised in 1988 (Fontana, 1995, p. 98), is a more advanced and developed model of intelligence.

Recent research findings on the structure of intelligence (Deary, 2012) supports Spearman’s ‘g’ theory, which accounts for half of the variance in intelligence tests. With reference to genetics and environment, Deary (2013) seems to support earlier findings by Eysenck (1979), when he argues that some of the causes of intelligence differences are genetically determined:

Twin and adoption studies provide evidence that differences in intelligence are heritable. The percentage of the variation in intelligence accounted for by genetic causes is usually given at about 50%. Heritability estimates for young children are typically lower, whereas estimates for adults are higher (up to 70–80%). (<https://www.sciencedirect.com/science/article/pii/S0960982213008440>).

General intelligence, also named fluid intelligence (Cattell, 1971a, b), is measured by administering tests of inductive and deductive reasoning, which are assumed to reflect the ‘ability to think, solve problems, make inferences, identify relations, and transform information in a significant way’ (Lopes Soares et al., 2015, p. 73). Cattell (1987) extended Spearman’s ‘g’ model by dividing it into two spheres: crystallised and fluid intelligence. Cattell (1971a, b) suggested earlier that that general ability can be subdivided into two further kinds, ‘fluid’ and ‘crystallized’. Fluid

abilities are the reasoning and problem-solving abilities, measured by tests such as analogies, classifications, and series completions, and demonstrating abilities or ‘mental efficiency associated with manipulation of information seeing complex relationships and solving problems’ (Duchesne & McMaugh, 2020, p. 389). On the other hand, crystallized abilities, which are thought to derive from fluid abilities, include vocabulary, general information, and knowledge about specific fields, involving culturally-based, and fact-oriented knowledge, acquired through experience in society.

Critique of Psychometric Theories of Intelligence

Some critics of the psychometric approach, such as Robert Sternberg (who formulated the Triarchic Theory of Intelligence), point out that individuals in the general population have a somewhat different conception of intelligence than most experts. It can be argued that the psychometric approach measures only a small part of what is commonly understood as intelligence. Also critical of the psychometric approach were Copping et al. (2014). Other critics, such as Sir Arthur Stanley Eddington, argued that the instrument used in testing often determines the results and that proving that intelligence exists, does not prove that current instrument measures it correctly (<https://www.k12academics.com/educational-psychology/intelligence/psychometric-intelligence/criticisms-psychometric-approach>).

More recently, Strauss (2017), in her research, discussed numerous unresolved educational and policy-related problems associated with the use of standardised tests, especially in diverse classroom settings. She cited the Florida case, where due to policy problems Florida has had with its standardized testing accountability system, which became so severe that school superintendents state-wide revolted in 2015 and said they had ‘lost confidence’ in its accuracy (Strauss, 2017). Strauss (2017), argued, similarly to Piaget’s (1950) original theory on cognition, adaptation and intelligence, the case for cognitive system changes in thinking, requiring on-going adaptation:

At the most fundamental level, education policy shaped by standardized test scores is at odds with the deepest of all societal needs — human survival. Inevitable environmental, demographic, technological, institutional, and cognitive system changes require continuous adaptation. Adaptation requires new knowledge. New knowledge is generated by dozens of complex thought processes — hypothesizing, inferring, relating, valuing, imagining, and so on. And of those dozens of complex thought processes, only two — recalling, and applying — can be quantified and measured with sufficient precision to produce a meaningful number (Strauss, 2017).

It has been argued that standardized intelligence tests that measure specific skills are misinterpreted as measures of intelligence (Sternberg, 1998; Sternberg, 2019; Gardner, 1999; Copping et al., 2014; Strauss (2017). Research has demonstrated that high-stakes standardized test scores are neither reliable nor valid, as they ignore the issues of individual differences, gender and cultural differences (Jensen, 1983;

Snyderman & Rothman, 1987). Another criticism refers to the use of intelligence and standardised tests as valid and reliable indicators of academic achievement and social outcomes. Simply because test scores and outcomes are correlated does not mean one causes or predicts the other, as test outcomes are influenced by a number of unacknowledged factors, including [genetics](#), environment, and culture.

Furthermore, the very nature of hypothetical constructs, such as intelligence, intelligence quotient (IQ), and ‘g’ suggest that they are distinct entities. Intelligence is the term used in ordinary discourse to refer to cognitive ability. However, it is generally regarded as too ambiguous to be useful for a valid measure of the individual’s cognitive abilities. The intelligence quotient (IQ) is an index calculated from the scores on test items judged by experts to encompass the abilities covered by the term intelligence. Since IQ measures a multidimensional quantity, it is a combination of diverse kinds of abilities, the proportions of which may differ between IQ tests (Intelligence, IQ, and g, 2018).

Cognitive-Contextual Theories of Intelligence

Cognitive-contextual theories of intelligence include Vygotsky (1934), Piaget, (1950) Guilford (1988), Sternberg (1998), Gardner (1999), and many others. Early, in his research, Piaget (1950) defined intelligence as the form of ‘equilibrium’ in the mind, rather than singular process of cognitive processes:

...intelligence constitutes the state of equilibrium towards which tend all the successive adaptations of a sensori-motor and cognitive nature, as well as all assimilatory and accommodatory interactions between the organism and the environment (Piaget, 1950, p. 8).

He developed his notion of the dual nature of intelligence, as something ‘both biological and logical’ (Piaget, 1950, p. 2). He also linked intelligence to adaptation:

It is in this sense that intelligence, whose logical operations constitute a mobile and at the same time permanent equilibrium between the universe and thought, is an extension and a perfection of all adaptive processes (Piaget, 1950, p. 8).

While Piaget (2001) emphasized individuals’ interaction with their environment, Vygotsky (1934) argued that development can only be understood within a social frame work. He defined intelligence as the capacity to learn from instruction and stressed that individual and his culture are connected through the process of interaction.

Guilford (1967) developed his, at the time innovative, three-dimensional image of intelligence (known as the Guilford’s cube). His cube lists 180 types of intelligence: 6 modes of mental operations (covering thinking, memory and creativity), times 5 types of content (visual, auditory, verbal etc) ‘times 6 types of products’ (relations, implications etc). Sternberg’s (1998), on the other hand, developed his Triarchic Intelligence Model, which listed 3 types of applications (rather than content) of intelligences:

practical (applied skills of teacher, student, or artist)
creative (ability to respond to novel situations, or in learning new skills) and
analytical (cognitive activity).

This theory is one of the few theories of intelligence, focusing on the development of knowledge-based expertise in all children through practice.

Finally, Howard Gardner (1983) developed his multiple intelligence (MI) model in *Frames of Mind* (1983), where he identified and defined his seven intelligences:

1. *Verbal-Linguistic Intelligence*: well-developed verbal skills and sensitivity to the sounds, meanings and rhythms of words
2. *Mathematical-Logical Intelligence*: ability to think conceptually and abstractly, and capacity to discern logical or numerical patterns
3. *Musical Intelligence*: ability to produce and appreciate rhythm, pitch and timber
4. *Visual-Spatial Intelligence*: capacity to think in images and pictures, to visualize accurately and abstractly
5. *Bodily-Kinaesthetic Intelligence*: ability to control one's body movements and to handle objects skilfully
6. *Interpersonal Intelligence*: capacity to detect and respond appropriately to the moods, motivations and desires of others.
7. *Intrapersonal Intelligence*: capacity to be self-aware and in tune with inner feelings, values, beliefs and thinking processes.

In 1999, in *Intelligence Reframed* (1999), he added the last two, *naturalist intelligence*, and *existential intelligence*:

8. *Naturalist Intelligence*: ability to recognize and categorize plants, animals and other objects in nature.
9. *Existential Intelligence*: sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here.

According to Gardner, all human beings possess all **nine** intelligences in varying amounts. He based his MI research on his interviews with and brain research on hundreds of people, including stroke victims, prodigies, and autistic individuals.

Critique of Cognitive-Contextual Theories of Intelligence

Vygotsky

McLeod (2018), suggests that Vygotsky's sociocultural perspective 'does not provide as many specific hypotheses to test it' as did Piaget's theory, making critical analysis and evaluation difficult, if not impossible (McLeod, 2018). His main criticism of Vygotsky's work deals with the assumption that Vygotsky's sociocultural perspective is 'relevant to all cultures' (McLeod, 2018). Earlier, Rogoff (1990)

dismissed the idea that Vygotsky's ideas are 'culturally universal and instead states the concept of scaffolding - which is heavily dependent on verbal instruction - may not be equally useful in all cultures' for all types of learning. In some cases, observation and practice may be more effective ways of learning certain skills (Rogoff, 1990). In addition, Didau (2017) also suggests that that the concept of ZPD is too vague:

we can perhaps conclude that bandying about the term ZPD is unhelpfully vague and imprecise. Learning and development are obviously closely linked but they're not synonymous. At one level we can make claims such as 'all learning is development' or 'all development requires learning' but then we're in danger of using circular logic. These statements are meaninglessly tautological. (Didau, 2017)

Piaget Theory of Cognitive Development

Piaget theory seemed to ignore individual and cultural differences in cognitive development. Research has disputed Piaget's argument that all children will automatically move to the next stage of development as they mature. Some data suggest that 'environmental factors may play a role in the development of formal operations' (Cherry, 2018). Other criticisms included the following: the theory of cognitive stages of development underestimated a child's capabilities, and skills, that the theory did not distinguish between competency and performance, and that it did not consider other factors such as the influence of self-esteem, motivation and emotion.

However, a great deal of the criticism of Piaget's work concerns his 'research methodology, based mainly observations of his own three children' (Cherry, 2018). In addition to this, the samples were biased as the other children in Piaget's small research sample were all from well-educated professionals of high socioeconomic status. As the samples were unrepresentative, it is difficult to generalize and apply his findings to a larger population. Piaget's research methodology is also problematic since he rarely detailed how his participants were selected:

Another problem is Piaget's lack of operationally defined variables. To replicate his observations in terms of validity and reliability, and objectively measure how one variable leads to changes in another, researchers need to have very specific definitions of each variable. Much of the terminology related to Piaget's theory lacks these operational definitions, so it is very difficult for researchers to accurately replicate his work (Cherry, 2018).

To sum-up, while many cognitive psychologists agree with Piaget's description of '*how* children think', many disagree with his explanations of '*why* thinking develops as it does' (Margetts & Woolfolk, 2019, p. 89). The three major criticisms, in addition to the above, refer to Piaget's fixed stages of cognitive development, his underestimating of children's cognitive abilities and the important effects of culture and environments on cognitive development.

Guilford's Cube

Some researchers have criticized the statistical techniques used by Guilford (Jensen, 1998), Carroll (1993), who was critical of the empirical basis of the model, summarized the view of later researchers:

Guilford's SOI model must, therefore, be marked down as a somewhat eccentric aberration in the history of intelligence models. The fact that so much attention has been paid to it is disturbing to the extent that textbooks and other treatments of it have given the impression that the model is valid and widely accepted, when clearly it is not (Carroll, 1993, pp. 57–60).

Sternberg's Triarchic Intelligence Model

One of the major criticisms of the Sternberg's Triarchic Intelligence Model deals with its lack of empirical framework. Linda Gottfredson (2003) believed that it was not logical to assume that traditional IQ tests do not measure practical intelligences. Gottfredson argued that Sternberg has not demonstrated a distinction between practical intelligence and the analytical intelligence, as measured by IQ tests. She also stated that the model lacked empirical evidence:

The bottom line for me is that he hasn't provided any good evidence to support his claim that there is a separate practical intelligence (cited in Goode, 2003).

Other researchers have demonstrated that people with high IQ to have reached higher in their career, have higher income. Also, traditional analytical intelligence also showed correlation with staying alive and out of jail, which is generally categorized as practical intelligence or street smarts (Triarchic Theory of Intelligence: Psychestudy, 2017).

Gardner's MI Model

Gardner's MI model has been criticised on numerous grounds. Critics believe that M.I. theory lacks the rigor and precision of an analytical and empirically-grounded methodology. M.I. theory states that one's culture plays a key role in determining the strengths and weaknesses of one's intelligences. Critics also argue that intelligence is revealed when an individual must confront an unfamiliar task in an unfamiliar environment. In addition, widespread adoption of multiple intelligence pedagogy would make it difficult to compare and classify students' skills and abilities across classrooms. Educators faced with overcrowded classrooms and lack of resources see multiple intelligence theory as a utopian dream. Some critics, according to Armstrong (2018), have accused MI practitioners of using 'superficial applications of MI theory—strategies of which even Gardner himself would not approve' (Armstrong, 2018). Finally, Armstrong (2018) in his *Multiple Intelligences in the Classroom* book, lists the following three major criticisms of Gardner's MI:

1. MI theory lacks empirical support.

Most of those making this complaint about MI theory, according to Armstrong (2018), belong to cognitive psychology (Waterhouse, 2006) or from the psychometric, or testing, community (Gottfredson, 2003).

2. No solid research supports the effectiveness of using MI in the classroom. This criticism parallels the first one in suggesting that MI has no empirical support, or, is not research- or evidence-based (Armstrong, 2018).
3. MI theory ‘dumbs down the curriculum to make all students mistakenly believe they are smart’.

Overall, critics of MI theory maintain that work is not ground-breaking, that what Gardner calls ‘intelligences’ are primary *abilities* that educators and cognitive psychologists have always acknowledged. It is not well defined. Some critics wonder if the number of ‘intelligences’ will continue to increase. These opposing theorists believe that notions such as bodily-kinaesthetic or musical ability represent individual aptitude, or talent, rather than intelligence.

Research Findings on Intelligence, Genetics and Environment

In his recent research, Corr (2016), suggests that there are ‘shared’ genetic influences affecting intelligence among individuals around the world. He cites Hagenaaers et al. (2016), who reported on a study of over 100,000 people, which demonstrated that there were shared genetic influences on intelligence. Eysenck’s (1973) earlier research findings on IQ and genetics, like those of Arthur Jensen (1983), which were at the time unpopular, seemed to be vindicated to some degree.. According to Corr (2016), Eysenck (1982) argued that general intelligence (a broad measure of mental capacity) had a ‘genetic basis, which is associated with a wide variety of life outcomes, including socioeconomic difference’ (Corr, 2016). However, what is not known is that Eysenck (1982) also suggested a more interactive model of intelligence, which combined both genetic and environmental influences, which was published in *New Education*. Eysenck discussed genotype, or the set of genes that the individual carries and phenotype, or observable characteristics, which influenced both by the individual’s genotype and by the environment, as the two major intersecting dimensions, defining and constructing the concept of intelligence. Eysenck stressed that even though some facets of intelligence were inherited, they were not fixed as such, as they were also affected by environmental influences.

The nexus between genetic and environmental influences was and continues to be an ongoing and controversial discourse in cognitive psychology, and especially in psychometric theories and biological theories concerning the nature of intelligence. Cognitive psychologists and intelligence researchers are still researching the extent of the impact of the nature/nurture theories on individuals and learning in schools.

Intelligence Testing

Intelligence testing has been used as a tool for academic achievement tests, placement tests and vocational selection. It is still used to select, place and categorise individuals into vocational/educational/career streams (vertical stratification). Some researchers have developed tests that value **process** over the final answer, such as **PAM** (Performance Assessment in Math) and **PAL** (Performance Assessment in Language).

Can we accept that individuals are born with a *fixed* amount of intelligence? If so, how such a view fit in the constructivist pedagogy, which stresses the importance of environmental factors in learning? If we accept the view that human beings possess multiple intelligences, but each person has a unique combination, or profile of various intelligences, what are we saying? Are we accepting uncritically the dominance of heredity over environment? Is it determinism over the free-will?

Aptitude and Intelligence

Aptitude is one of the key constructs in *Scholastic Aptitude Test Assessment* (SATA), designed to measure different abilities. Short answer tests are not used because they do not measure disciplinary mastery or deep understanding. Aptitude can be defined as ‘innate or learned ability or skill, which reflects an individual’s intellectual capacity to learn and attain a level of performance or academic achievement in a particular field/discipline’ (Zajda & Zajda, 2013) Aptitude is a key dimension in all definitions of intelligence. Aptitude is often associated with cognitive ability, and aptitude/intelligence tests. In re-thinking of the concept of aptitude, we need to refer to the legacy of Richard E. Snow (1977) who researched extensively human aptitudes, individual differences and learning environments. In his work, Snow provided a new definition of aptitude, which differed from the cognitive abilities, as it included conative (motivational) and affective (emotional) characteristics (see also Goleman, 1995). Snow also coined ‘aptitude-complexes’ theory, which explained the nexus between personal aptitudes and situational demands, which interact to determine the level of performance. Aptitude, together with metacognition and reflection plays an important role on problem solving.

There are two opposing view of aptitude: those who maintain that aptitude is innate, like the ‘g’ factor, and those who believe that aptitude can be acquired over the years. The latter view represents the cognitive theory of aptitude for learning. Aptitude plays a key role in intelligence testing. Some of the widely used aptitude/intelligence tests include:

- Stanford-Binet Intelligence Quotient
- Wechsler Intelligence Scale for Children (WISCIV)
- Woodcock Johnson Test of Cognitive Ability

Stanford-Binet Intelligence Quotient

In 1927 Charles Spearman developed the concept of ‘g’—a model of intelligence. Spearman proposed his *two-factor theory* of intelligence: *general intelligence* factor, or ‘g’ and *specific ability* factors, or ‘s’ factors. Charles Spearman, using the statistical procedure called factor analysis, concluded in 1904 that intelligence is made up of two components: a **g-factor** (general intelligence) and **s-factors** (a collection of specific cognitive intellectual skills). Spearman also used his construct of specific mental abilities (or ‘s’) to explain individual variations in performance. In short, general mental ability, or ‘g’, reflected the speed and efficiency of cognitive operations, or brain processing power. On the other hand, specific mental abilities (or ‘s’) represented the specific cognitive abilities used to solve specific tasks. This instrument, which is widely used, measures five factors of *cognitive* abilities: knowledge, working memory, quantitative reasoning, visual-spatial ability, and fluid reasoning. Each of these five factors is measured and the combined score becomes the intelligence quotient (IQ).

Wechsler Intelligence Scale for Children (WISC)

The Wechsler Intelligence Scale for Children (WISC) was developed in 1949, as an adaptation of David Wechsler’s 1939 Wechsler-Bellevue Intelligence Scale (see Wechsler, 1944). This version of the Wechsler test is a psychological assessment tool that measures various aspects of intelligence and is designed to test children between the ages of 6 to 16 (see also Wechsler, 1975). WISC is an IQ test. The aim of the instrument is to identify giftedness, learning disabilities, or general strengths and weaknesses a child may have in their *cognitive* abilities. The test has undergone several revisions and the current version of the test is the fifth edition WISC-V which was released in 2014. The WISC consists of a series of short sub tests that are used to assess cognitive ability. Though this test can be used as an IQ test for children, it is most often used as a clinical tool to measure *individual cognitive abilities*. The WISC is often used among a battery of other tests to assess and identify cognitive function and ability ranges which can help. WISC relies on the hypothesis that cognitive skills, or intelligence, are normally distributed throughout the population. The main benefits include:

- Early identification of reading & learning issues;
- Useful in identifying learning disabilities;
- Understanding of an individual’s learning profile;
- Identification of gifted children;

The assessment also helps schools make appropriate; accommodations and develop learning plans for individual students. (<https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-Assessments/Cognition-%26-Neuro/Gifted-%26-Talented/Wechsler-Intelligence-Scale-for-Children-%7C-Fifth-Edition-/p/100000771.html>)

Woodcock Johnson Test of Cognitive Ability

The Woodcock-Johnson Tests of Cognitive Abilities is a set of intelligence tests first developed in 1977 by Richard Woodcock and Mary E. Bonner Johnson. The Woodcock-Johnson Tests were revised most recently in 2014 and this latest version is commonly called the WJ-IV test. The Woodcock-Johnson Tests of Cognitive Abilities can be given to children from the age of 2 through adulthood. The Woodcock Johnson test covers a wide range of cognitive skills. The Woodcock-Johnson-III and Woodcock-Johnson-IV Tests of Achievement are a 22-section achievement test, which assesses both academic achievement (what children have learned in school) and *cognitive development*. It is sometimes paired with an intelligence test to qualify children for gifted and talented programs. The Woodcock-Johnson Tests of Cognitive Abilities measure the greatest breadth of cognitive abilities of any standardized body of tests. Also, the test contains new domain-specific scholastic aptitude CLUSTERS that allow for efficient and valid predictions of academic achievement, providing even more feedback for specific help that can be given for a child. The tests of academic achievement help compare a given child's levels of achievement to academic knowledge (<https://www.testingmom.com/tests/woodcock-johnson/>).

Aptitude and Achievement Tests

Both aptitude and achievement tests measure cognitive development of different abilities. Aptitude tests are specifically designed to measure abilities developed over many years and predict how well a student will do in the future at learning unfamiliar material. Achievement tests measure academic performance. The IQ test is one of the most influential and widely used aptitude tests. The IQ test is a measure of scholastic aptitude. If intelligence quotient defines intelligence as being a single measurable trait affecting all mental ability, aptitudes reflect a multi-modal mental ability, suggesting that they also differ in quality as well as quantity.

More recently, the Colleges of Oxford University have introduced a *History Aptitude Test* (HAT) for use in the selection of candidates for all degree courses involving History. This test, which aims to examine the skills and potentialities required for the study of History at university, gives us an objective basis for comparing candidates from different backgrounds, including mature applicants and those from different countries. It is designed to be challenging, to differentiate effectively between the most able applicants for university courses, including those who may have achieved or can be expected to achieve the highest possible grades in their examinations. (The History Aptitude Test (HAT) Retrieved from <https://www.history.ox.ac.uk/history-aptitude-test-hat>).

Evaluation

Critique of psychometric theories of intelligence, as demonstrated above, shows that psychometric approach, as used in traditional IQ tests, measures only a small part of intelligence and ignores other parts. Critique of Cognitive-contextual theories of intelligence, with reference to Vygotsky, Piaget, Guilford, Sternberg, and Gardner reveals both conceptual and methodological problems, not to mention ambiguities with definitions of the constructs themselves.

IQ tests have been criticised by some researchers and educators for measuring only a fraction of human intelligence, as shown above, and for being culture-specific (Martschenko, 2018), and for minimizing the ‘varied nature of crystallized and semi-fluid intelligence factors as described in [Cattell–Horn–Carroll theory](#)’ (IQ – RationalWiki, 2018). Another serious conceptual problem with the IQ tests is that it relies on the use of the normal curve of the norm-based assessment, and promoted as a ‘normalised measure, calibrated to have 100 as the average and 68% of people in the 86-115 range under Wechsler Adult Intelligence Scale’ (IQ – RationalWiki, 2018):

So an IQ of 140 measured now is not the same as an IQ of 140 measured 10 years ago. There are by this measure people are getting less intelligent. It was never designed to be an absolute measure. (IQ – RationalWiki, 2018).

Black (2017) in examining high stakes IQ testing noted a ‘long-term trend of rising average intelligence test scores within the general population’, which is called the Flynn Effect (FE). The concept was coined by Herrnstein & Murray in 1994 (see also Flynn, 1987, 2012). Although the Flynn Effect has been observed in many populations globally, and discussed widely, scholars, according to Black (2017) tend to disagree on its ‘variability with various factors, and some populations even exhibit a reverse FE - that is, decreasing IQ scores over time’ (Black, 2017). Pietschnig and Voracek (2015) examined meta-analysis on the topic, which revealed ‘worldwide IQ gains across more than one century (1909–2013), based on 271 independent samples, totaling almost 4 million participants, from 31 countries’, and noted that The Flynn effect, or rising intelligence test performance in the general population over time and generations, ‘varies enigmatically across countries and intelligence domains; its substantive meaning and causes remain elusive’. Their key findings included that:

IQ gains vary according to domain (estimated 0.41, 0.30, 0.28, and 0.21 IQ points annually for fluid, spatial, full-scale, and crystallized IQ test performance, respectively), are stronger for adults than children, and have decreased in more recent decades. Altogether, these findings narrow down proposed theories and candidate factors presumably accounting for the Flynn effect.

As to the use of intelligence testing in schools and elsewhere, it can be argued that both the term intelligence and the notions of intelligence testing, by their nature of intended selection, exclusivity, distinction and cognitive stratification tend to undermine the egalitarian ethos of democracy and democratic practices in the

classroom and divide the learning community. Defining a very small number of individuals as exceptionally able, due to some intelligence factors or traits, seems to create unnecessary painful, and prejudicial social categories and meritocratic divisions in society. It seems that some policy-makers and educators, by using the weapon of ‘rationality’ attempt to justify and legitimise intelligence testing or ‘placement’ testing—on the grounds of natural aptitude, efficiency and differentiation in learning.

Intelligence/aptitude testing controversy (it is still on-going), which categorises individuals into most able versus least able, does reflect the unresolved tensions between the heredity (nature), cultural factors (language and perception in different cultures) and environment (nurture) discourses. Accepting the limitations imposed by one’s genetic code could lead to a re-invented *geno-determinism*—a new ‘regime of truth’ of the triumph of the genetic code over the free will.

The power of science, measurement and knowledge control in the knowledge society rests not so much in its claims to objectivity, which could be questioned, but in its ubiquitous use of intelligence testing, as a convenient instrument of the assessment of intellectual and cognitive functioning. From a critical discourse analysis one could argue that intelligence testing, both traditional and modern, have the potential for categorizing test-participants by social class, culture, race, ethnicity, and gender. Intelligence testing has become an ideology of oppression, division and domination, which legitimizes even further the unequal treatment of individuals, according to their perceived abilities, thinking and skill levels. Intelligence testing creates a deterministic, or Nature over nurture debate, rather than voluntary, or free will view of learning. Intelligence testing, as such, becomes a powerful ideology of meritocracy, social stratification, academic achievement stratification, domination and control, both in the classroom and in life.

Conclusion

As the above analysis demonstrates, that the intelligence testing, which categorises individuals into most able versus least able, does reflect the unresolved tensions between the heredity (nature), cultural factors (language and perception in diverse cultures) and environment (nurture) discourses. We must resist any attempts at categorising and dividing individuals into classes of ‘bright’, ‘not so bright’ and ‘feeble-minded’, or slow learners. These labels undermine the whole concept of democratic schooling, based on equality and social justice and serve to legitimise a very conservative ideology of meritocracy, very dramatically illustrated in the ‘Brave New World’, where citizens in a futuristic society have been classified into alphas (top citizens who have the best of everything), betas (second best) and epsilons (working slaves). Intelligence/aptitude theories, which categorize individuals into ‘most able’ versus ‘least able’, do reflect the unresolved tensions between the heredity (nature), cultural factors (language and perception in diverse cultures) and environment (nurture) discourses. Accepting the limitations imposed by one’s

genetic code could lead to a re-invented *geno-determinism*—a new ‘regime of truth’ of the triumph of the genetic code over the free will. Both the term *intelligence* and the notions of *aptitude/intelligence testing*, and by their nature of intended selection, exclusivity, distinction and social stratification, based on meritocracy and aptitude, tend to undermine the egalitarian ethos of democracy and democratic practices in the classroom and divide the learning community. Defining a very small number of individuals as exceptionally able due to some intelligence factors or traits not only support the meritocracy theory, but also seems to create unnecessary, painful and prejudicial social categories and meritocratic divisions in society, which are accentuating and legitimizing social inequality.

Chapter 6

Values Education and Creating Effective Learning Environments: A Global Perspective



Globalisation as a Multi-faceted Phenomenon: Implications for Values Education

Defining Values

What I want to argue is that values education and effective learning environments are necessarily connected to students' knowledge of democracy, active citizenship education, social justice and human rights education, and results in a positive and significant impact on students' identities, engagement, and academic achievement. Halstead and Taylor (1996) argued that values were 'central' to the theory of education and schools in 'two ways':

First, schools and individual teachers within schools are a major influence, alongside the family, the media and the peer group, on the developing values of children and young people, and thus of society at large. Secondly, schools reflect and embody the values of society...(Halstead & Taylor, 1996, p. 11).

Halstead and Taylor (1996) suggested a pragmatic three tier typology for conceptualising values education in society and schools:

1. Values as a set of subjective criteria for making judgments, and linked to a 'relativist view that no set of values can be shown to be better than another'.
2. Values as absolute, and 'applying everywhere and at all times'. Certain human actions are 'always right or always wrong, irrespective of circumstance'.
3. Certain values, such as 'animal rights, patriotism, equal opportunities or bravery, have some kind of objective quality, insofar as some social arrangements and patterns of behaviour promote well being more than others' (Halstead & Taylor, 1996, p. 14).

This three tier typology of values is very useful in various discourses, surrounding values in general and values education in schools, in particular. It demonstrates

an on-going complexity in defining, understanding and the use of values in society. Global research findings have demonstrated the nexus between values education and students' academic performance in schools. Values education to be meaningful, engaging and authentic must involve a greater sense of active citizenship education, social constructivist pedagogy, and more emphasis on cultural diversity, critical thinking and a deeper and critical understanding and knowledge of democracy, equality, human rights and social justice for all (see Zajda, 2021).

All teaching and learning in classroom settings globally is necessarily grounded in morality, ethics and laws, defining and directing schools and classroom pedagogies. Ethics, derived from moral philosophy, is concerned with the study of right and wrong action, or choosing between good or bad. While teachers are entitled to their own beliefs and values, in the classroom, teachers' responsibility is defined and guided by the school's policy and rules, designated classroom pedagogy, prescribed curriculum, specific discipline content and its standards, and desirable students' outcomes (Zajda, 2020a).

Values can be defined as the principles governing rules and moral standards for socially desirable actions and behaviour. Such values include freedom, democracy, equality, justice, beauty, truth, honesty, loyalty, and human rights. Hill provided his preferred definition of values as 'the priorities individuals and societies attach to certain beliefs, experiences, and objects, in deciding how they shall live and what they shall treasure'. Values also provide moral standards, by which actions are judged as right or wrong (Zajda, 2018c). In general, values refer to beliefs held by individuals or groups concerning moral standards defining actions that are 'good or bad', and what is desirable and what is not desirable (Giddens, 2009).

Values are regarded as one of the most fundamental components, like ideology, of a group's culture (Zajda & Majhanovich, 2021). They generally represent the core of the ideological system, and provide individuals with values about their cultural identity, and which define and characterise the social group and its membership (Zajda & Majhanovich, 2021). Smolicz (1999) stressed the symbolic and collectivist essence of values and their significant role in maintaining both individual and collective identity: 'it is through core values that social groups can be identified as distinctive ethnic, religious, scientific or other cultural communities' (Smolicz, 1999, p. 105). Cummings et al. (2001) in their comparative study of values education in 12 countries, observed that at the core of values education is the autonomous individual, and suggested that values education will have a high priority, and schools will play a key role in values education (see also Habermas, 1990; Shor, 1992; Halstead, 1996; Hattie, 2003; Brady, 2005; Brady, 2011a; Zajda, 2018c; Zajda & Majhanovich, 2021).

Values Education

The term values education refers to a multifaceted process of socialization in schools, which transmits dominant values, in order to provide and legitimate the necessary link between the individual, the group and society. Values education is a structured process of instilling desirable aspects of moral education, ethical traits and standards. Values are culturally internalized, shared, and transmitted ideas about what is good or desirable. Values may refer to: a particular belief system—believing that pluralist democracy is the best model of social/political system; a code of conduct—being honest, tolerant and courageous; a state of existence—peace, tolerance and equality; or a moral judgment—truth, beauty, and justice.

Every society has its own rules defining behaviour and actions. This is a normative dimension of a society and its culture, consisting of norms, and values. Values refer to ideas held by individuals or groups concerning moral standards defining actions that are ‘good or bad’, or what is desirable and what is not desirable (Giddens, 2009). Values are regarded as one of the most fundamental components (like ideology) of a group’s culture (Zajda, 2009a, p.13). They generally represent the core of the ideological system, and provide individuals with values about their cultural identity, and which define and characterise the social group and its membership (Zajda, 2009b; Zajda, 2020a). Smolicz (1999) stressed the symbolic and collectivist essence of values and their significant role in maintaining both individual and collective identity: ‘it is through core values that social groups can be identified as distinctive ethnic, religious, scientific or other cultural communities’ (1999, p. 105).

Since the 1990s, a number of scholars and policy analysts began to stress the moral function of pedagogy, both locally and globally (Purpel, 1999; Cummings et al., 2001; Bindé, 2002; Zajda, 2014; Lovat, 2017; Zajda, 2018b). For instance, Jacques Delors (1996) in his report to UNESCO of international Commission on education for the Twenty-first Century, *Learning: the Treasure Within*, believed that education had an important role to play in promoting tolerance and peace globally:

In confronting the many challenges that the future holds in store, humankind sees in education an indispensable asset in its attempt to attain the ideals of peace, freedom and social justice (p. 13).

A similar concern with a moral dimension in education is present in Jérôme Bindé (2002) in ‘What Education for the Twenty-First Century? It is argued that a new paradigm shift in education should be aiming to ‘humanize globalization’ (Bindé, 2002, p. 391, see also Bindé, 2000). At the same time he reminds us that one of education’s future major challenges will be to use the new information and communication technologies to disseminate knowledge and skills (Bindé, 2002; see also Zajda & Gibbs, 2009).

Cultural Origins of Values

We are all citizens of one world; we are all of one blood. To hate a man because he was born in another country, because he speaks a different language, or because he takes a different view on this subject or that, is a great folly. Desist I implore you, for we are all equally human...Let us have but one end in view, the welfare of humanity. Comenius (1592–1670)

Global research on social, cultural and political capital demonstrates that the core values of a culture act as ‘strong forces’ that shape societies (Cummings et al., 2001; Willms, 2003; Zajda & Daun, 2009; Zajda & Ozdowski, 2017). Every society has its own rules defining behaviour and actions. This is a normative dimension of a society and its culture, consisting of norms, and values. Some researchers have argued that values may focus on ‘ends’ such improvement in culture or the quality of life (Cummings et al., 2001; see also Purpel, 1999; Zajda & Daun, 2009). Others have focused on ‘means’ such as the ‘enhancement of civic mindedness’ (Cummings et al., 2001, p. 11).

Values education is an essential part of school pedagogy, even though the nexus between values education and pedagogy is very contested and problematic. The situation is further complicated, as values education (and moral education) seem to be ‘subject to changes of fashion’ (Winch & Gingell, 1999). Berkowitz (2011) perceived the values education process in schools to be an ‘attempt within schools to craft pedagogies and supportive structures to foster the development of positive, ethical, pro-social, inclinations and competences in youth...’ (Berkowitz, 2011, p. 153). For instance, when MacIntyre (1981) re-interpreted and revived the Aristotelean pedagogy of values education, it became a very popular approach to virtue theory, which was based on Aristotle’s *Nichomachean Ethics*. Virtue advocates argue that moral concepts and values should be explicated in terms of character traits, which children can internalise, through classroom pedagogy and reflection. In the Soviet Union this process of moral education was known as *vospitanie* (upbringing) (Zajda, 2017). Desirable character traits or *virtues* include tolerance, altruism, asceticism, benevolence, honesty, courage, fairness, moderation, conscientiousness, selflessness, sincerity, humility, modesty, magnanimity, sympathy, tactfulness, diligence, nobleness, trust, self-mastery, solidarity, and frugality.

Are values to be ‘caught’, instead of being taught? Values such as *peace, tolerance, courage, civility, honesty, moderation, and frugality* should be taught to all if we are to maintain a truly caring and responsible democratic community. Some values deal with proper ways, or standards, of interacting with others (being polite, cooperative, truthful, and accepting). Other values describe desirable states of existence to which we all aspire—desire for work, happiness, peace, love, and fulfilling life (see also Kohlberg, 1975).

Revell and Arthur (2007), using their data of 1000 student teachers, analysed student teachers’ attitudes to and experience of character and values education in schools and the opportunities provided by schools for the development of character. Their findings demonstrated that student teachers were overwhelmingly in favour of

developing their skills in the area of moral development. The authors concluded that whilst character education was seen as part of citizenship education in the school curriculum in England, the data indicated that it was not part of the formal curriculum of teacher education.

Teaching our students morality or values education, means teaching them what we ourselves, as citizens, with a democratic voice in a pluralist democracy, understand by morality and moral values. It is important to understand that not only values may vary from culture to culture they are also subjective, and relative. A value considered good in one society at a particular point in time may be bad in different era. For example, the White Australia Policy, which enforced racial aspects of the immigration law, was dismantled by the Holt Government's Migration Law in 1966, and 1973 marked the end of the White Australia policy. Similarly, the value of racial segregation in the USA, or *de jure segregation*, or segregation sanctioned by law, was practised until 1954, when the US Supreme Court ordered that the public schools be desegregated. The value has shifted towards racial equality, inclusive schooling and school integration. It has taken many decades to achieve this significant value shift.

Global Models for Values Education

The Western and non-Western models of values act as dominant agencies of socialization for values education, social identity, and nation-building. Western-informed international conventions provide value statements globally. The United Nation's *Universal Declaration of Human Rights* (UN, 1948) was a statement by the international community of the inalienable rights and fundamental freedoms for all human beings. In Article 26, Part 2 it stressed that education 'shall be directed...to the strengthening of respect for human rights and fundamental freedom. It shall promote understanding tolerance and friendship among all nations, racial or religious groups...' (UN, 1948, p. 7). Other specific value positions are found in various international and legal treaties. For example, the four major Council of Europe treaties protecting the human rights of children combined offer a policy direction for developing and promoting a global vision for a better childhood. The four principal treaties are the European Convention on Human Rights (1950), the European Social Charter (1996), the European Convention on the Exercise of Children's Rights (1996) and the European convention on Contact Concerning Children (2003). Values associated with schooling are found in the Report to UNESCO of the International Commission on Education for the twenty-first century, *Learning: The Treasure Within* (Delors, 1996) and its four essential pillars of education for the twenty-first century: *learning to know*, *learning to do*, *learning to live together* and *learning to be*. More recently, the UNESCO Conference on Education for Shared Values and for Intercultural and Interfaith Understanding (2005) called on educational systems to incorporate common and agreed values into school curricula, to promote intercultural and interfaith understanding. Recently, the idea of 'global

competence' was developed by OECD and PISA. The teaching of global competence to enhance students' knowledge and values of intercultural sensitivity was developed in *Preparing our youth for an inclusive and sustainable world the OECD PISA global competence framework* (PISA, 2018b):

Global competence is a multidimensional capacity. Globally competent individuals can examine local, global and intercultural issues, understand and appreciate different perspectives and world views, interact successfully and respectfully with others, and take responsible action toward sustainability and collective well-being... Schools can encourage intercultural sensitivity and respect by allowing students to engage in experiences that foster an appreciation for diverse peoples, languages and cultures (PISA, 2018b, p. 4).

Local and National Values

Values education differs around the world, both locally and globally. Different values are transmitted, according to differences in societies and cultural settings, be they religious, cultural or political. In some communities and societies, dominant values are defined by the ideology of religion or politics. As Huntington (1996) pointed out, in his book *The Clash of Civilizations and the Remaking of World Order* culturally diverse nations, divided by different and competing ideologies for global dominance, have different values priorities. In the USSR, prior to 1991, values education was based on cultivating a communist morality of *Homo Sovieticus*, and promoting a collectivist, rather than individual identity. In the USA, being a democratic society, the values of individualism, equality, freedom, democracy and self-fulfilment are inculcated in schools. Values education in Europe reflect economic and social principles, which embrace student-centred learning, accompanied by dominant values embedded in cognitive, social and emotional development, and vocational philosophies of achievement, success and work.

Both Bronfenbrenner (1979) and Banks (2012, 2013) offer two different models of values education shaping one's social and cultural identity. In his research, Bronfenbrenner focused on major agencies of socialisation shaping the self and identity. On the other hand, Banks (2013) developed a very influential model of multicultural education, grounded in values education and citizenship education (see below).

Urie Bronfenbrenner's Model

Urie Bronfenbrenner (1917–2005) was the Jacob Gould Schurman Professor of Human Development and of Psychology in the Cornell University College of Human Ecology. He developed an ecological model describing major socio-cultural factors defining values and shaping one's social identity and learning (Bronfenbrenner, 1979, 2005). Bronfenbrenner's model depicts 5 concentric circles:

microsystems (learner's immediate environment—family, friends, peers, and teachers) *mesosystems* (the nexus between home and school, community and school), *exosystems* (parental aspirations and goals), *macrosystems* (cultural and societal dominant values affecting the individual), and *chronosystems* (the influence of the milieu and time). Bronfenbrenner's model was adapted and widely used by the International Association for the Evaluation of Educational Achievement (IEA) in Citizenship and Education in Twenty-Eight Countries study of values education in civics. The Octagon model used in IEA studies was based on 8 major socializing agencies affecting the values of individuals in different countries.

James Banks and His Model for Multicultural Education

James A. Banks, Professor in Education and Chair in Diversity Studies at the University of Washington, the author of *Educating Citizens in a Multicultural Society* (2007), developed his popular model for multicultural education in schools in his book *An Introduction to Multicultural Education* (2013). The model for values education within the framework of multiculturalism, proposed by Banks, consists of 5 Dimensions of Multicultural Classrooms: *Content Integration* (teaching diversity); *Knowledge Construction* (teaching how knowledge is created); *Prejudice Reduction* (developing positive relationships among students of different ethnic backgrounds); *Equity Pedagogy* (facilitating the academic success of students from different ethnic and social class groups); and *Empowering School Culture* (inclusive classroom environment that is conducive to the academic and emotional needs and growth of all students).

Values Education in Schools

Values education in schools is a complex and controversial area of the curriculum. It is an essential, contested and constantly changing area of study that develops critical thinking skills that are vital for all other areas of study. A very good example of the nexus between globalisation, and values education in humanities and social sciences education is the National Council for the Social Studies in USA. According to NCSS, social studies educators should 'teach students the content knowledge, intellectual skills, and civic values necessary for fulfilling the duties of citizenship in a participatory democracy and that in 'In a multicultural, democratic society and globally connected world, students need to understand the multiple perspectives that derive from diverse cultural vantage points' (*National Curriculum Standards for Social Studies*, 2010). Carr et al. (2017) in examining the nexus between multicultural social justice education, democracy, and education for democracy, argued for the need to employ critical thinking and critical pedagogies, in order to develop a new knowledge and skills of 'transformative education for democracy':

Our findings underpin the need to include critical pedagogies that focus on reflexivity, transmediation, autobiography, and self-positionality throughout the educational process. A broad, multi-pronged framework for conceptualizing a critical, engaged, transformative education for democracy is proposed, in which multicultural social justice education is inextricably interwoven (Carr et al., 2017).

The Nature of Values in Schools

Values may refer to a particular belief system—believing that pluralist democracy is the best model of social/political system, a code of conduct—being honest, tolerant and courageous, a state of existence—peace, tolerance and equality), or a moral judgment—truth, beauty, and justice. Different values are associated with different criteria. We can differentiate between aesthetic, cultural, civic, family, economic, environmental, intellectual, legal moral, political, religious, scientific, technological and social values. Snook (2003) noted the nexus between ethical theory and classroom pedagogy (see also Carr, 2000; Snook, 2003; Zajda, 2014). In his book, *The Ethical Teacher*, Snook (2003) argues that the ethical teacher is one who understands both the moral purpose of education and the importance of viewing the process of teaching as essentially ethical in its nature. Among the ethical teacher's roles, Snook identifies *respect for autonomy* and *respect for reason*. He asks the question: How can teachers respect the learner as a person and yet try to change her in fundamental ways? This, according to him, constitutes the basic ethical dilemma of teaching:

The ethical teacher, taking into account the student's age and maturity, tries to impart not just the conclusion of processes and arguments but the methods of arriving at the conclusions: not just ways of behaving but an understanding of these ways of behaving and the reasons for them. Thus, guided by teachers who respect her reason, the student gradually learns to use her own reason, to become autonomous, and hence does not have to rely forever on the views of others. This task of handing over full control to the learner may take a long time but it needs to be begun early so that she learns the habit of 'thinking for herself.' (Snook, 2003).

Purpel (1999) argued for a need to frame education as primarily a 'moral, cultural, and social endeavour' (p. 3) and for teachers to develop a social vision, and be prepared to be engaged in social transformation and holistic education:

To be an educator without a social vision is like being an artist without an aesthetic, and to be a holistic educator without a social vision is to be like an artist without a soul Purpel, 1999, p. 135).

In examining moral education, we note at least two closely related problems in discourses and debates surrounding ethics—the lack of provision of moral education, and the loss of moral direction in society. One could argue that a proper moral education is one that provides an adequate understanding of the 'moral sphere' (see Woods & Barrow, 1995; Purpel, 1999), just as the study of history equips one with the logic of historiography and the values of historical thinking. Earlier, in his work,

Barrow (1977) asks the question ‘What is the most *effective* way to morally educate the children?’ (Barrow, 1977, p. 199). He suggests that children inevitably do, to some extent, acquire moral attitudes from their environment, which includes parents and teachers, and other role models. Perhaps the most important point Barrow makes is when he argues that it would be wrong to assume that what a moral philosopher says is true must be so. Look to his reasoning –not his judgment, reminds us Barrow (Barrow, 1977, p. 212).

The Politics of Values Education

The current debate on values education has become an overtly partisan political issue producing a dominant ideology of teaching values and character education. I am reminding the readers that what we call values education was known as ‘character education’ in most schools during the nineteenth and twentieth centuries. Recently, values education has become a ‘metaphor and code’ for pedagogy pursuing the neo-liberal and conservative social and cultural agenda (Purpel, 1999, p. 83). In some ways the values taught in schools are traditional rather than modern:

...the values taught in the schools are very much in line of Puritan tradition of obedience, hierarchy, and hard work, values which overlap nicely with the requirements of an economic system that values a compliant and industrious work force, and a social system that demands stability and order (Purpel, 1999, p. 89).

Not only values education appears to be more traditional than modern, but by emphasising such traditional values as loyalty, responsibility, duty, obedience and honesty they may well be advancing a newly reinvented moral paradigm of ‘domesticating values’ (Snook, 2003). He argues that that all programmes of values education are dependent on political judgements, and tend to reinforce the existing inequality:

They serve to reinforce the status quo and the power structures which serve the interests of the dominant group. We need only reflect for a moment on how the values of “loyalty and submission” and even “love” have served the oppression of women by men while generations of South Africans and African Americans were schooled to know their place and be loyal to their exploiters...

The curriculum is an ideological construct, and discourses surrounding cultural and political dimensions of schooling should emphasise the ideological nature of school subjects and moral/character/values education (Narvaez & Rest, 1995; Purpel, 1999; Apple, 2004; Zajda, 2009d; Zajda, 2014; Zajda, 2021). As Purpel argues, part of this strategy is to create a discourse in which the schools are blamed for not ‘teaching values’. Such a discourse, which defines desirable values to be taught in schools, attempts to shift the argument from social and political spheres to the individual and personal traits. Blaming the individual for not learning desirable values is far more acceptable than blaming society and its structures, which exert a powerful socialising influence. Purpel also reminds us that ‘Moral issues are by

definition socially and culturally situated and any dialogue on proper character is based on some communal notion of propriety' (Purpel, 1999, p. 89). Yet, values education research is characterised by the near absence of political, social, cultural and ideological analysis. This is a paradox, as researchers and writers addressing the issues of moral crisis would necessarily need to explain social, political and economic conditions responsible for such a phenomenon (see also Arenas et al., 2009).

Moral Dilemmas

We can easily reach a consensus, at the most abstract of levels, on such values as fairness, obedience, loyalty and kindness. The Nuremberg and other trials for crimes against humanity demonstrated that obedience and loyalty to a given regime is sometimes a vice. Individuals have been executed for being obedient and following the orders of various political leaders/dictators. As Snook (2003) points out, even such a value as 'loyalty', when translated into practice, can be problematic:

... loyalty - surely we should be loyal only to those who deserve it? It is debatable whether citizens should be loyal to governments that break their word once elected. Should students be loyal to a school that treats them unjustly? Should ethnic minorities be loyal to institutions that have grossly discriminated against them? Should a woman be loyal to the man who abuses her? Should staff be loyal to educational institutions which have rejected the basic values of the academic life?

.... The lesson is that one should be obedient only to worthy authorities. We have to ask if our "democratic" governments of recent years have been worthy of our obedience...

Virtues such as freedom, justice, truth telling and kindness are general moral principles, or abstractions. They, in themselves, cannot explain daily applications. Hence, values education need to be practical, as individuals confront their values, societal values, choices and their applications in everyday life. Furthermore, a critical understanding, analysis and evaluation of moral principles such as freedom, human rights, social justice and responsibility in classroom pedagogy constitutes the essence of morality and value education and should form the foundation of moral education of an individual. Here, the focus is on translating abstract moral principles into everyday life.

The methodology and methods of values education in schools, which advocate that values need to be taught, rather than left to chance, could be Durkheimian in the sense that morality must be taught rather than caught. Marsh (2011) describes values education as the development of students' understanding of challenges and 'making choices about how to respond'. *The National Framework for Values Education* (2005) in Australia articulated two distinct styles of Values Education: the first develops abstracted and shared values and virtues; the second develops the critical thinking skills required to develop the students' ethical judgements and understanding of values. Understandably, there is constant tension in the content, philosophical and pedagogical approaches, process and product of values education.

The Victorian Curriculum and Assessment Authority (VCAA) (2015) in the State of Victoria (Melbourne) produced a set of guidelines for Values Education in the school curriculum. The guide is not intended to be prescriptive (i.e. schools have flexibility in choosing their approach to values) and it is not intended to be specific stand-alone teaching (rather, it should be incidental teaching points within everyday learning contexts). The *National Framework for Values Education in Australian Schools* (DEST, 2005) provided a policy statement for an overarching framework for developing a vision for values education in schools. It identified the following nine core values for Australian schools:

- Care and compassion
- Doing your best
- Fair go
- Freedom
- Honesty and trustworthiness
- Integrity
- Respect
- Responsibility
- Understanding, tolerance and inclusion.

The Melbourne Declaration (2008) stated that it was the schools' responsibility to ensure that young people are taught national values such as democracy, equity and justice; and personal values such as honesty, resilience and respect for others.

Incorporating Values into the History/ HUMANITIES Curriculum

Values Education in Humanities and Social Sciences

Humanities and social sciences can assert a special interest in values learning that directly supports active citizenship in our participatory and pluralist democracy. Butts (1988) identified **twelve** core values that had to be taught, as a part of students' preparation for citizenship in a genuinely democratic society. The values are divided into two clusters: these that deal with the *obligations of citizenship* and those that define the *rights of citizenship*. Accordingly, we have an important *citizenship obligation* to support:

- justice for all,
- equality of opportunity,
- legitimate authority,
- participation,
- truth,
- patriotism.

The *rights of citizenship* include:

- the right to freedom,
- diversity,
- privacy,
- due process,
- property,
- human rights

Objectives of Values Education in the Classroom

Approaches to values education in the Humanities and social sciences curriculum should serve at least two general goals:

- To help students make the most of their lives (within reason, as ‘Sky is **not** the limit’).
- To preserve and improve our evolving democratic society.

Other, more specific goals include:

- Helping students to appreciate one another’s cultural differences.
- Helping students and teachers to identify cultural stereotypes as presented in the media, when teaching values of cultural diversity.
- Teaching students to avoid using language that is insensitive, offensive, embarrassing or damaging (Boyer, 1990, p. 3).
- Helping teachers develop multiple perspectives, conceptualizations and behaviors, when teaching values education.
- Teachers should aim to foster respect, tolerance and equality among diverse students, as equal members of their school
- Helping students to understand that our social responsibility extends beyond local and national boundaries.

Humanities and social sciences curriculum focuses on how students learn to think about, uphold and apply values. This allows children to view values as a valuing process of feeling, thinking, expressing and acting by which people make or imply judgments about what is desirable, good or bad, moral or immoral. Gilbert (2011) suggested that there are different elements in teaching values in the classroom:

- Understanding values principles- Values that derived over centuries through religion, and social policies, and politics. Analyzing the value of democracy—refers to the integrity and rights of all people and promoting equal opportunities and equal participation.
- Logical and empirical analysis- applying values in real life contexts and with the belief that certain actions will have certain effects.

- Empathy, tolerance and open mindedness- being open to the views of others without judging (p. 89).
- Caring—acting in ways that promote and enhance moral or ethical behaviour.

Values can be incorporated in the area of Humanities and social curriculum and generally works well in an inquiry based approach (IA), and constructivist learning and teaching, focusing on citizenship as the area of study. Marsh (2011) argued that there were 4 subject groups designated to teach values in Humanities and social sciences which are:

- Democratic process: promoting ideals of equal participation and access for individuals and groups
- Social justice: including the concern of welfare, rights and dignity for all, empathy with multicultural families and fairness
- Ecological and economical sustainability: quality of peoples' lives and the natural environment
- Peace: promoting positive relations with others and the world (Marsh, 2011).

Classroom Strategies for Teaching Values

In the Humanities and social sciences F-6 classroom some of the many approaches to values education are:

- **Values Inculcation.** Instilling socially desirable values in students – through direct teaching, including story-telling, or indirectly through routine practices in the classroom, role models, reinforcement, praising, simulation and role playing to instil values in students.
- **Values Clarification** allows students to be more socially aware and become critical thinkers. It also helps students understand and accept everyone's values and beliefs. Includes practical activities to clarify feelings towards person/ event/issue.
- **The Social Action and Participation.** This approach to values education assumes that individuals learn values best by practicing them. There are numerous examples of social action and participation projects, including EfS (education for sustainability), 'circles of democracy' in the classroom, human rights education etc. (Goodman, 1994).
- **The Trait approach** refers to values that are classified more important than others and involves teaching a set of qualities such as honesty, loyalty and compassion.
- **Service Learning approach** – activities at school and in the community. According to Freakley (2008), schools should provide experiences as opportunities to practice making a *choice of actions*.
- **Cognitive Development Approach** is where values education is seen as a movement through stages. This helps students to improve reasoning and to not differ-

entiate right and wrong decisions. Includes dilemma activities, small group discussions, decision making tasks to further develop students' values.

- **Role Plays** explores multi-layered values in complex moral scenarios. It is responsible for finding solutions in spontaneous unrehearsed dialogue (see Brady, 2011a; Brady, 2011b).
- **Empathy Approach** involves an informed understanding and interpretation of cultural diversity, or the values of others in different cultures.
- **The Time-Traveller Approach** involves looking back at historical events, locating them in a time continuum, and relating to current events in history.

Students can be given responsibility, can make decisions, and can develop their own views in relation to what has happened in the past. They can set up classroom governments, and look at questions of human rights and individual and corporate responsibility in current events (Turner, 2011). Classroom activities may include:

- Using children's literature to provide examples and exercise values (Martin, 2009).
- Classroom activities should provide experiences as opportunities to practice making a choice of actions (Freakley, 2008).
- Setting a positive role model—you are a role model for the students in your classroom
- Being truthful and honest: The best way to encourage truthfulness in students is to be a truthful to them. Encourage them to also be truthful to others in the classroom.
- Generating serious questions that will promote dialogue about values—telling students what values they should have won't be very effective. Asking them 'curious' questions will allow discussions that will eventually lead to values. 'What did you think about that fight? What do you think he should have done? Will be more effective than, He shouldn't have started that fight!' (Brandenburg, 2011)
- Encouraging students to be involved in helping others. Students learn values by practicing them (Brandenburg, 2011).

Values Education and Academic Achievement

Recent research has produced evidence of the nexus between values education and academic achievement. Berkowitz (2011) argues that recent empirical research demonstrated that fostering the development of 'positive, ethical, pro-social inclinations and competencies in youth' resulted in improvement in their achievement. Tarabashkina and Lietz (2011) in examining the impact of values and learning approaches on student achievement, confirmed findings of earlier research about the relationship between personal values and approaches to learning. In addition, Tarabashkina and Lietz (2011), discovered the existence of a very strong positive effect which emerged from the achievement value, demonstrating that students who identified strongly with the achievement value also displayed high

levels of strategies and motivation that characterize achieving approach to learning (Tarabashkina & Lietz, 2011).

Lovat et al. (2011) in their research on the impact of students' values on academic achievement, demonstrated the effects of values education on enhancing students' academic diligence, through the more positive ambience it creates in the school. Similarly, Lovat (2017), having evaluated current research finding, dealing with values education and academic achievement, suggests that values education, properly implemented, is likely to impact positively on a range of educational goals, emotional, social, moral and academic.

There is also a new insight regarding the nexus between neuroscience, feelings, emotions and values education (Immordino-Yang & Damasio, 2007). Immordino-Yang and Damasio (2007) stated that advances in neuroscience are 'highlighting connections between emotion, social functioning, and decision making' that change our understanding of the role of affect in education:

In particular, the neurobiological evidence suggests that the aspects of cognition that we recruit most heavily in schools, namely learning, attention, memory, decision making, and social functioning, are both profoundly affected by and subsumed within the processes of emotion; we call these aspects *emotional thought* (Immordino-Yang & Damasio, 2007).

Lovat et al. (2010) suggested that a contemporary understanding of values education, or values and wellbeing pedagogy, fits well with recent neuroscience research:

Notions of cognition, or intellect, are far more intertwined with social and emotional growth than earlier educational paradigms have allowed for. In other words, the best laid plans about the technical aspects of pedagogy are bound to fail unless the growth of the whole person – social, emotional, moral, spiritual and intellectual, is the pedagogical target (Lovat et al., 2010).

Recently several neuroscientists like Churchland (2018), and Narvaez (2014) have argued that moral education possesses rare potential to activate those emotional and social centres of the brain that, taken together, can influence the form of sound reasoning associated in educational research generally with effective learning. Narvaez's (2014) research shows that this stimulation relies on both the learning ambience and what she refers to as efficacious pedagogy, a pedagogy that is morally bound and focussed on eliciting moral content from the curriculum. Lovat (2017) suggests that it is research of this type that would appear to highlight yet again the significant role that moral education can play, by activating students' emotional and social dimensions, and in enhancing all educational goals. Research findings also show that that good practice pedagogy must be directed to the whole person. Furthermore, it is the process of cognition that activates a range of emotional, social and moral impulses.

Evaluation

For some educational philosophers and writers values education is the essential part of school pedagogy (Peters, 1967; Carr, 1993; Cummings et al. 2001; Brady, 2011a, Zajda, 2014, 2018b; Zajda & Majhanovich, 2021). For other prominent educational philosophers, the nexus between values education and pedagogy is much contested and problematic (Phillips, 1979; Straughan, 1982; Ryle 1972). The debate as to whether values education should be taught in schools, is further complicated, by fads and fashions, as Winch and Gingell (1999) argued, that moral education seems to be ‘subject to changes of fashion’ (p. 147). For instance, when Hare (1963) was popular in the UK, his theory of moral education was very popular, and when MacIntyre (1981) re-invented the Aristotelean pedagogy of values education, it became very popular approach to virtue theory, which was based on Aristotle’s *Nichomachean Ethics*. Kohlberg (1981) criticised the virtue theory approach for advocating ‘a crude deontological approach’ to values education (don’t lie, don’t steal, don’t cheat). According to Kohlberg, virtue education as part of moral education, requires deliberation and reflection, where complex moral choice (or moral dilemma) is involved (see Winch & Gingell, 1999, p. 245).

The issue is not so much methodological or pedagogical, as to the approaches to be used in classroom pedagogy of values education, but rather one between the ‘believers’ and ‘non-believers’ concerning teaching values education in the classroom. Ryle (1972), who criticised moral education in schools, argued that morality is caught not taught. He argued that if we define teaching as ‘the passing on of expertise’, then any notion of moral expertise seems ‘deeply dubious’, for if such expertise did exist we expect for it to be institutionalised (Winch & Gingell, 1999, p. 148). Straughan (1982), on the other hand, in his critique of dominant approaches to the content of values education and the structure of values education, and the contested areas and boundaries between moral reasoning and the content of morality, suggested a pragmatic approach to values education, based on what I call the 3Ms of moral education:

- *teaching that* informed decisions must be made in making moral choices
- *teaching how* to think for themselves as autonomous moral agents
- *teaching children to want* to be moral (to guarantee moral goodness in an individual) (see also Winch & Gingell, 1999, p. 149).

To adopt Straughan’s (1982) approach to values education, especially ‘teaching to want to be moral’, which continues the role of exemplification in values education stressed by moral philosophers such as Carr (1993), Phillips (1979) and Ryle (1972). Pedagogues, as role-models, should act morally themselves and exemplify the role of moral agents or portray a moral action charisma. Snook (2003) argues that values education has to be supported but it must be ‘liberated from those who seek to cure the ills by more doses of the medicine which caused them’. As he reminds us, schools ought to practice pluralist democracy, by discussing its values:

There must be a place for the disparity of views which mark a pluralistic society. Current proponents are fond of talking of the values which we all share. More important are the values which divide us; it is conflict, not consensus which marks the values domain: young people in schools should confront these conflicts and learn to handle them rationally and tolerantly (Snook, 2003, p. 6).

Using Straughan's (1982) approach to values education, namely 'teaching to want to be moral', suggests that values education to be meaningful, engaging and authentic must involve more emphasis on critical thinking, and discourse analysis and a deeper and critical understanding of democracy, equality, human rights and social justice for all. There is also a connection between values education and academic achievement. The nexus between values pedagogy and academic performance has been demonstrated in recent research findings in neuroscience.

Furthermore, Shor (1992) argued for the nexus between pedagogy, empowerment and democracy. He suggested that the values that guide education should be participatory, affective, emotional, as well as intellectual, problem-posing, situated, multicultural, dialogic, activist, democratic, and 'desocializing', thus challenging both existing knowledge, and the experiences that make us what we are.

The above approaches to teaching values education in schools indicate that for values education to be effective, there is a need in teacher education to educate prospective teachers in major models of values education and classroom applications, as discussed above.

Conclusion

As demonstrated above, values education in schools globally play a significant role in promoting democracy and active citizenship education, in effective, dialogical and engaging learning environments. Teaching such core values as democracy, freedom, active citizenship, intercultural understanding, human rights, social justice, and peace, consolidates our ideal of participatory democracy. In schools, both locally and globally, where values education and critical literacy are taught effectively, values should be discussed and critiqued, within the paradigm of cultural diversity, and pluralist democracy, grounded in human rights and social justice discourses. Values education has a potential to affect and change individuals in every sphere: cognitive, social, emotional, moral and educational. Values education in schools ought to represent our quest for the ideal of the morally good society, in order to promote a deeper, meaningful and critical understanding of democracy, equality, human rights and social justice for all. Values education to be meaningful, engaging and authentic in schools globally, must involve a greater sense of active citizenship education, grounded in pluralist democracy discourses.

Chapter 7

Education Quality in Schools: Researching Dominant Paradigms



Quality Debate in Education: Introduction

Global Standards of Academic Achievement

Quality education discourses have been influenced by the standards-driven culture of students' academic performance and performing schools. Academic standards play a significant role in defining and communicating international indicators of students' performance. Global comparisons (PISA) demonstrate that quality teaching involves content that is of a high standard, rigorous, integrated and relevant. Quality teaching and learning begins with the best teachers. In Australia, both the Australian Institute of Teaching and School Leadership, and Teacher Education Ministerial Advisory Group (TEMAG) were established to improve professional standards for teaching, to improve teacher quality, and to identify the world's best pedagogy, in terms of how teachers teach and the content of the school curricula. The quality of teaching and students outcomes is on the education agenda of governments globally. Globally, Australia's education performance was slowly declining. According to the OECD's Program for International Student Assessment (PISA), one-quarter of Australian year 4 students did not meet the minimum standard of reading proficiency (Thomson et al., 2012), and Australia's top 30–40% of students were falling behind the best in the rest of the world. In the current rankings of *PISA Worldwide Ranking – average score of math, science and reading* (PISA, 2018a) Australia was number 21 (502.3 score), behind New Zealand (505.7 score) and Poland (503.7 score). In 2019, Australia was number 29. The top three performing countries were: Singapore (551.7 score), Hong Kong (532.7 score) and Japan (528.7 score). The OECD recognises that raising the quality of teaching is an important focus for education and training policy globally.

Recent comparative education policy research also reflects a rapidly changing world, socially, culturally, educationally and technologically. This is largely due to

powerful forces of globalisation, global competitiveness, and the spectacular growth of the knowledge society, generated by information communication technologies (ITCs). Education policy research reflects this, as evidenced by a global reliance on OECD generated indicators of academic achievement, defined by test results and examinations (OECD, 2018, 2019a; Weisenthal, 2013; PISA, 2018a). Research indicates that cultural capital, as a significant dimension of educational inequality, continues to shape and influence students' academic achievement and destinies globally (Sullivan, 2002; Saha, 2005; OECD, 2009a, b, c; PISA, 2018a; Zajda, 2014, 2018a, b, c, d, 2020a). Cultural capital, as coined by Bourdieu (1986), defines dominant conceptions of what constitute desirable knowledge, knowing, and social value (see Bourdieu & Passeron, 1977, for the origins of the term cultural capital).

Educational systems, by upholding a single 'gold standard' defining knowledge, standards, excellence and quality in education, not only reinforce the differentiated achievement status of privileged groups/levels in society, but also reward those who are conversant with implicit rules of dominant ideology (Zajda, 2009a, 2020c). In their quest for quality and accountability in education, both locally and globally, governments increasingly turn to global models of academic performance, and comparative education data analysis. The use of the World Bank and OECD in international comparisons of educational outcomes demonstrates the perceived need for such comparisons. The OECD, in co-operation with UNESCO, is also using World Education Indicators (WEI) program, covering a broad range of comparative indicators in academic achievements (see also Scheerens et al., 2011; Roser et al., 2013; Patrinos, 2018; UNESCO, 2018, 2019; PISA, 2018b). Patrinos (2018) presented the largest globally comparable panel database of education quality. The database included some 163 countries and regions over 1965–2015. It analysed the globally comparable achievement outcomes, which were constructed by linking 'standardized, psychometrically-robust international and regional achievement tests' (Patrinos, 2018).

Defining Education Quality

Knowledge and understanding what education quality means varies between nations globally. There are numerous definitions of education quality, demonstrating the conceptual complexity and culturally diverse aspects of the concept. Such terms as efficiency, effectiveness, equity and quality have often been used synonymously (Adams, 1993; Rasheed, 2000). Different educational organizations have their own specific definitions of education quality. However, most education policy analysts tend to agree on following three broad principles:

- **the need for relevance**
- **the need for equity of access and outcomes,**
- **proper observance of individual rights (UNESCO, 2004).**

However, Patrinos, (2018), in contrast to the UNESCO (2004) policy document, *Education for all: The quality imperative*, examined education quality purely in terms of standardized achievement tests globally.

Education Quality Global Definition

Based on research findings, I would like to offer the following conceptual definition of quality education for all. Education quality is defined as a progressive approach to schooling, which offers equality of opportunity, curriculum meeting the local needs and students' developmental stages, critical thinking, and high academic standards and high academic performance outcomes. Education quality is perceived in terms of the following factors:

- providing equitable access to schooling
- offering quality curriculum addressing students' needs, relevant content and developing in students major dimensions of cognitive, social and affective domains
- cultivating the quality of learning in schools, and developing students' critical thinking and metacognitive skills
- offering globally-relevant standards of performance
- proving excellent and inspirational teachers in schools
- offering desirable educational outcomes for all students.

Education Quality: Input and Output Policy Perspective

What is precisely *quality* in education? What are the most important aspects of quality and how can they be measured? These questions have been raised for a long time and are still widely debated. When George Psacharopoulos (1995), from the World Bank, was asked to define quality education, he answered that quality education definitions could be classified into two major groups: those using the input method and those using the output method (Psacharopoulos, 1995, p. 33). According to him, the *input* policy analysts 'compute the expenditure per student in different schools and conclude that schools spending more on each student are better quality schools than those that spend less'. The *output* policy analysts, to which he belonged, 'compare the level of student cognitive achievement in different schools and conclude that the higher achieving schools are of better quality' (Psacharopoulos, 1995, p. 33). He added that achievement is measured in 'value-added terms', that is by comparing what a student gains in terms of achievement (other things being equal) by attending school A instead of school B. Finally, he concluded that 'quality is a continuum concept'. Bacchus (1995), on the other hand, defined quality in

education by using a professional versus a popular (as viewed by parents and the community in general) view.

Education Quality: Students' Academic Performance

At the Commonwealth Secretariat's Consultative Meeting on *Improving Quality of Basic Education* (November, 1989), it was noted that quality in education was a multi-dimensional concept, with a 'range of definitions and with differing weight given to its various components by different actors in the educational process (Commonwealth Secretariat, 1989, p. 1). Despite this fact, the public in general, and parents and students in particular, often seem to have 'fewer doubts about what is implied by the term and for them, improving the quality of education often means raising the level of a academic performance' (Bacchus, 1995, p. 7; see also Kaagan & Smith, 1985; Adams, 1993; Bergmann, 1996; Barrett et al., 2006; Eze, 2009; Barrett & Sorensen, 2015). This emphasis on students' academic performance and the examination results, as an index of the quality of education, is particularly significant in the marketing of schools and the resultant definition of performing schools, in terms of standards. In addition, the quality of education globally is measured by outcomes of schooling, specifically in core disciplines: reading and language proficiency, mathematics and numeracy, and scientific knowledge and understanding.

Barrett et al. (2006) in their comparative research of the international literature on the concept of quality in education concluded that the components of a quality framework included 'effectiveness, efficiency, equality, relevance and sustainability'. The authors also argued that these components of educational quality can offer a 'useful analytical framework for the concept' (p. 15).

In 2017, two leading education organizations that represent over 30 million educators globally—ASCD, based in the Washington, D.C. and Education International (EI), and in Brussels, Belgium, released a policy [statement in support of the SDGs and the pursuit of quality education for all](#). In the statement, ASCD and EI define quality education in terms of 'the *social, emotional, mental, physical, and cognitive development*' and *preparing for life, and 'not just testing'*:

A quality education is one that focuses on the whole child—the social, emotional, mental, physical, and cognitive development of each student regardless of gender, race, ethnicity, socioeconomic status, or geographic location. It prepares the child for life, not just for testing. (Slade, 2017)

In *Transforming Our World: The 2030 Agenda for Sustainable Development*, United Nations

Goal 4 of the SDGs: *Quality Education: Ensure inclusive and equitable quality education and promote lifelong learning* was a 'unique goal' that focused purely on quality education (Slade, 2017). This was the first time that quality education goal had been set and ratified. According to Slade (2017) quality education was defined

by the three key pillars: ‘ensuring access to quality teachers; providing use of quality learning tools and professional development; and the establishment of safe and supportive quality learning environments’ (Slade, 2017).

Education Quality: Contesting Metaphors

The concept of ‘quality’ in education conjures up many metaphors. In general, one could distinguish between two dominant metaphors in the quality in education debate: the functionalist metaphor of quality in education, and the negotiated order metaphor. The functionalist metaphor, with its emphasis on merit and meritocracy, focuses on performance and outcomes. It is also known as the economist approach, with its focus on ‘efficiency and effectiveness, and academic achievement of learning outcomes’, defined in terms of academic achievement. This approach is identified with the World Bank (Barrett et al., 2006, p. 3).

Unlike the functionalist metaphor, which defines quality as absolute or total, with clearly defined educational outcomes, the negotiated metaphor derives from the interactionist, or interpretive approach, together with the humanist and progressive perspective to schooling (Zajda, 1994; Verenikina, 2003; Oliver, 2011). The humanist approach to schooling is defined by its focus on the development of the whole person and a corresponding human development. The negotiated metaphor is a dynamic one, where patterns and images of quality are continuously rediscovered, redefined and negotiated.

Quality in education, from a *teacher’s* perspective, and building on the negotiated metaphor, can be defined as a specific classroom pedagogy, which transforms the learner’s cognitive, emotional, and social base to a new dimension of critical thinking, empowerment, values, wisdom, and creativity. It results in an innovative and complex ways of thinking and transformational nexus between the self, the community, the world and the universe. Here, the student, the teacher, the school principal, and curriculum team leader, participate fully in negotiating and interpreting meanings of quality in education. It is also an example of an authentic social constructivism in the classroom. Darling-Hammond et al. (2019) argued for the need to offer the ‘kinds of relationships and learning opportunities needed to promote children’s well-being, healthy development, and transferable learning’ and providing the development of ‘social, emotional and academic skills’:

It indicates how schools can be organized around developmentally-supportive relationships; coherent and well-integrated approaches to supports, including home and school connections; well-scaffolded instruction that intentionally supports the development of social, emotional, and academic skills, habits, and mindsets; and culturally competent, personalized responses to the assets and needs that each individual child presents. (Darling-Hammond et al. 2019)

Darling-Hammond et al. (2019) offer a very useful model for organizing the curriculum and teaching, focusing on the holistic approach to students’ cognitive, social and emotional developments, and providing relevant academic skills.

The Quality of Education Debate in Education

To assess quality in education and learning achievement, and to provide possible answers to these questions, the UNESCO International Institute for Educational Planning (IIEP) organized a Strategic Debate ‘Defining and measuring the quality of education: Is there an emerging consensus?’ (15 December, 2011). The topic was approached from the point of view of recent cross-national surveys: the OECD Programme for International Student Assessment (PISA). The evidence on the quality of the outcomes of education systems was drawn from PISA. OECD’s performance indicators have generated a *quality control* in educational outcomes globally (OECD, 2018; Zajda 2009a, 2020a).

One of UNESCO’s first policy statements on quality in education appeared in *Learning to Be: The World of Education Today and Tomorrow* (1972). In another UNESCO (2014) policy document ‘Quality Education’, a quality education was defined broadly, as one that ‘satisfies basic learning needs’ and more importantly, ‘enriches the lives of children’:

Quality is at the heart of education and what takes place in classrooms and other learning environments is fundamentally important to the future well-being of children, young people and adults. A quality education is one that satisfies basic learning needs and enriches the lives of learners and their overall experience of living. (<http://www.unescobkk.org/education/efa/efa-goals/quality-education/>)

UNESCO’s framework on the variables of education quality has five dimensions:

1. **Learner Characteristics:** including learner aptitude, perseverance, readiness for school, prior knowledge, barriers to learning, and demographic variables.
2. **Context:** including public resources for education, parental support, national standards, labour market demands, socio-cultural and religious factors, peer effects, and time available for schooling and homework.
3. **Enabling Inputs:** including teaching and learning materials, physical infrastructure and facilities, and human resources.
4. **Teaching and Learning:** including learning time, teaching methods, assessment, and class size.
5. **Outcomes:** including skills in literacy and numeracy, values, and life skills. (UNESCO, 2004, p. 36).

In addition, Schleicher (2011) at the IIEP Strategic Debate suggested that creativity was one of the indicators of quality education:

Students’ capacity to extrapolate from what they know and apply this creatively in novel situations is more important than what the students know. (Schleicher, 2011)

Schleicher (2011) also argued that there was a need for a paradigm shift in quality pedagogy, where all students needed to learn at high cognitive levels, where curriculum, pedagogy and assessment were structured around the notion of ‘learning to learn’, and ‘complex ways of thinking’, and where teacher quality was exemplified by ‘high-level professional knowledge workers’.

In attempting to answer ‘What does quality mean in the context of education?’ Rasheed (2000) in his paper presented by UNICEF at the meeting of the International Working Group on Education Florence, Italy, June 2000, wrote that ‘many definitions of quality in education exist, testifying to the complexity and multifaceted nature of the concept’, and that such terms as Adams (1993) explained ‘efficiency, effectiveness, equity and quality have often been used synonymously’ (Rasheed, 2000). Rasheed (2000) argued that quality education had to include the following five indicators, with reference to students, environment, curriculum content, classroom pedagogies and ‘knowledge, skills and attitudes, and are linked to national goals for education’:

- Learners who are healthy, well-nourished and ready to participate and learn, and supported in learning by their families and communities;
- Environments that are healthy, safe, protective and gender-sensitive, and provide adequate resources and facilities;
- Content that is reflected in relevant curricula and materials for the acquisition of basic skills, especially in the areas of literacy, numeracy and skills for life, and knowledge in such areas as gender, health, nutrition, HIV/AIDS prevention and peace.
- Processes through which trained teachers use child-centred teaching approaches in well-managed classrooms and schools and skillful assessment to facilitate learning and reduce disparities.
- Outcomes that encompass knowledge, skills and attitudes, and are linked to national goals for education and positive participation in society.

(<http://www.unicef.org/education/files/QualityEducation.PDF>).

According to this particular definition the concept of quality takes into account the ‘global and international influences that propel the discussion of educational quality’ both locally and globally (Rasheed, 2000, p. 4).

Power (2014), however, argued that that quality education ‘empowers individuals’, and that education empowers only, if it leads to the development of ‘knowledge, expertise, talents and values, and to the wise and ethical use of that knowledge and expertise’ (Power, 2014, p. 13).

The two main principles that characterise most attempts to define quality in education, as listed in *The Education for All: Global Monitoring Report 2005 – The Quality Imperative*, refer to learners’ cognitive development, and the role of education in ‘promoting values and attitudes of responsible citizenship and in nurturing creative and emotional development’ (p. 17).

In October 2009, Angel Gurría, (OECD Secretary-General) in ‘Education for the future – Promoting changes in policies and practices: the way forward’ described some of the changes and priorities in education for tomorrow. Some of them are:

First of all, in our schools, students typically learn individually and thus, at the end of the school year, we certify their individual achievements. But the more globalised and inter dependent the world becomes, the more we need great collaborators and orchestrators, not isolated individuals, no matter how well they do. We need to form people for a more inclusive world: people who can appreciate and build on different values, beliefs, cultures.

Inter-personal competencies to produce inclusive solutions will be of growing importance. Second, the conventional approach in school is often to break problems down into manageable bits and pieces and then teach students how to solve each one of these bits and pieces individually. But in modern economies, we create value by synthesising different fields of knowledge, making connections between ideas that previously seemed unrelated... Third, if we log on to the Internet today, we can find everything we are looking for. But the more content we can search and access, the more important it is to teach our students to sort and filter information. The search for relevance is very critical in the presence of abundance of information... The 21st century schools therefore need to help young individuals to constantly adapt and grow, to develop their capacity and motivation, to expand their horizons and transfer and apply knowledge in novel settings. (Gurria, 2009)

Tikly and Barrett (2011) analyzed three inter-related dimensions of the quality of education from a social justice perspective. These dimensions focused on inclusion, relevance and democracy. The authors argued that their social justice framework provided an 'alternative rationale for a policy emphasis on quality that encompasses but goes beyond that provided by human capital and rights approaches' that provided a 'normative basis for thinking about quality in relation to development' (Tikly & Barrett, 2011, p. 3).

The concept of *quality* in education in our culture has an almost taken-for granted concept, or what the French thinker, Barthes (1973) called it, the *mythical* aspect, in the sense that a 'myth prefers to work with poor and incomplete images, where meaning is already relieved of its fat, and ready for signification' (Barthes, 1973, p. 127). Also, such myths can function to hide ideology and the ideological function of signs. The power of such myths is that they do not need to be deciphered, or interpreted. In this sense, the idea of quality in education becomes a myth-making construct, defining the ideal.

However, in terms of the global emphasis on academic standards and students' performance in schools, the key measure of quality education in schools continued to be an *instrumental* one, namely the 'final year results, or scores of the schools' students and the number of these students who gained places in, firstly, prestigious universities and secondly, in prestigious faculties within those universities (Zajda & Zajda, 1995, p. 46).

Re-conceptualising of the Quality Debate

Having briefly considered various approaches to quality education debate, we need to offer a new paradigm of quality in education. Using policy documents from the UNESCO, OECD, and UNICEF, we can suggest that quality education needs to demonstrate quality in all of these aspects: students, environment, curriculum content, classroom pedagogies and 'knowledge, skills and attitudes, and are linked to national goals for education'. To these, we can add learning to learn, complex ways of thinking, critical literacy, creativity, and empowerment. We can visualise the quality education as concept map: a sphere with many-sides, each side representing a particular aspect of quality in education. Madani (2019) also argues that there is a need for a 'multifaceted' of reasoning framework in quality education:

A major challenge lies in defining the ideal education indicators and circumstances among countries; especially poorly developed countries that strive to establish a quality evaluation theme. Therefore, there is need of multifaceted standpoint and reasoning framework to realize educational policy evaluations that can truly contribute to the improvement of educational situation in developing countries and around the world. (Madani, 2019)

The above-mentioned policy documents defining, describing and critiquing quality in education can be divided into two broad categories. The first one is the OECD's PISA study assesses the competencies of 15-year-olds in reading, mathematics and science in member and non-member countries. It offers a numerical measure of performance, or quantitative, rather than qualitative analysis of academic achievement. Policy documents on quality in education offered by UNESCO belong to the second category. In *The Education for All: Global Monitoring Report 2005 – The Quality Imperative* (2005) the authors argue that 'It could be judged unfortunate that the quantitative aspects of education have become the main focus of attention in recent years for policy makers' (p. 29). UNESCO's policy documents offer predominantly qualitative and holistic definitions and discussions of quality in education. In discussing quality in education they refer to equity, social justice, human rights, peace education, and advancing values of active, informed and responsible citizenship (Zajda, 2018c).

Quality for All

Having discusses quality in education; we need to address the question of quality in education for all students globally. The question of providing quality for all students globally can only be meaningful in the context of the inequality debate in our societies. It would be unrealistic to pretend that every individual in a society has an equal access to schooling, quality education, and can be educated to the same qualitative outcomes as all others. Quality in education, in terms of quality and standards of knowledge, engaging environments, critical thinking skills, and quality teaching, is therefore denied to large sections of society, simply due to lack of cultural, social and economic capital, and equal access to quality schooling for all. For decades sociologists and educators have argued about the importance of life chances or socio-economic and cultural factors, which are essential, in terms of human capital paradigm, for one's success in life. These are still on the quality education agenda debate (see also PISA 2018a, b).

According to the OECD (2019c) education quality policy analysis, the 'promise of quality education for all is yet to be fulfilled' as there is an urgent need of improving access and standards in literacy and numeracy in developing nations:

Enrolment in pre-school and in post-primary education is growing globally, yet there is still much scope to improve access in many developing countries. Compounding this challenge, while primary school enrolment has increased over the past two decades millions of children complete primary education without mastering basic numeracy and literacy skills. (OECD, 2019c, p. 7)

Conclusion

This chapter analyses outcomes-based quality of education debate, and suggests a new paradigm of quality of education and pedagogy. The above demonstrates that quality in education, apart from numerous views and definitions, involves numerous organisations and individuals. From a critical theory perspective, there may well be some serious flaws in the usage of the metaphor of quality in education, whenever attempts are made to package such a complex, and diverse variety of processes, outcomes, and standards of academic performance. This is particularly the case when such governance processes and educational outcomes depend not only upon the degree of power and control of various accreditation agencies and the assessors of quality in education indicators in educational institutions globally, but also on the motivation and personal commitment of students, teachers, and visionary school leaders in the overall enhancement of quality in education in the teaching/learning process. The focus on standards-driven reforms, and the current outcomes-based quality debate, which is driven by assessment and examinations results, may be one-dimensional in essence. We need to include a whole range of other indicators, which describe individual, social, cultural, economic, and political dimensions impacting in the on-going education quality debate. Unless we do this, our present education quality discourse and debate, with its ubiquitous focus on norm-referenced testing, which refers to [standardized tests](#) that are designed to compare and rank students against one another, will remain linear, limited and one-dimensional. Such an approach to schooling in the performance-oriented culture is at odds with democracy, equity pedagogy, and students' individual and cultural differences in cognitive, social and emotional development, both locally and globally.

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Index

A

- Abdullah Alwaqassi, S., 44, 58
Ability, 56
Ability self-concepts, 13
Academic achievement, 1, 6, 7, 9, 13–15, 18, 23, 33, 35, 53, 54, 61, 63, 71, 73, 104, 107
Academic achievement goals, 26, 34
Academic achievement stratification, 88
Academic achievement syndrome, 60
Academic assessment-driven curriculum, 69
Academic disengagement, 69
Academic performance, 9, 26, 35, 53, 55, 69, 110, 112
Academic self-concept, 1
Academic standards, 15, 50, 116
Accommodation, 40
Achievement motivation, 23
Achievement outcomes, 25
Achievement tests, 86
Active citizenship, 101
Active engagement, 15
Acton, G., 44, 58
Adak, S., 35
Adams, D., 115
Adler, E., 37
Afro-American students, 61
Agencies of socialisation, 2, 3
Ainsley, M., 14, 17
Akpan, J., 37, 39
Alexander, C., 62
Alhadabi, A., 17, 26
Alienation, 3
Al Sayyed Obaid, M., 44, 58
Alt, D., 35
Altugan, A.S., 6
American Psychological Association (APA), 51
Ames, C., 25
Ammon, P., 40
Anderman, E., 17
Anderman, L., 17
Anderson, B., 6
Anderson, M., 75
Andreouli, E., 68, 69
Anti-Discrimination Act 1991, 52
Apple, M., 99
Applied behaviour analysis (ABA), 21, 22
Aptitude, 59, 84, 89
Arenas, A., 100
Arends, R., 38
Arends, R.I., 19, 22, 24, 29, 32
Aristotle, 36
Aristotle's *Nicomachean Ethics*, 94
Armstrong, T., 82
Assimilation, 40, 62
Atkinson, J., 23
Atkinson, T., 57
Attitudes, 2
Attitudes of teachers, 61
Attribution, 23
Attributional theory, 24
Australian Human Rights Commission, 52
Australian Institute of Teaching and School Leadership, 109
Authentic learning, 50
Ayaz, M.F., 35

B

Bacchus, K., 112
 Baker, B., 62
 Bakker, H., 71
 Ballová Mikušková, E., 71
 Bandura, A., 13, 17, 18, 21, 23, 27, 40
 Banks, J.A., 96, 97
 Barbe, W., 57
 Barlett, F., 36
 Barrett, A.M., 112
 Barrow, R., 98, 99
 Barthes, R., 116
 Bauman, G., 4
 Beard, B., 37, 39
 Beck, C., 40, 41
 Beck, R.C., 21
 Behar-Horenstein, L., 60
 Behavioural learning theory, 21
 Behavioural motivation theory, 33
 Behavioural theory of motivation, 31
 Behaviour patterns, 2
 Belonging, 31
 Benavot, A., 18
 Benson, E., 71, 72
 Berkowitz, M., 94, 104
 Berman, M., 5
 Berv, J., 40
 Bindé, J., 93
 Binet, A., 72, 77
 Biological theories, 73
 Biological theories of intelligence, 74
 Black-American children, 62
 Black, M., 40
 Bloom, A., 15
 Boaler, J., 60
 Bochner, S., 22
 Boivin, M., 1
 Bourdieu, P., 8, 15, 110
 Bowles, S., 46
 Brady, L., 92
 Brandenburg, M., 104
 Briggs, S., 62
 Bronfenbrenner, U., 33, 96
 Brooks, J., 38, 48
 Brooks, M., 38
 Brophy, J., 19, 64, 65, 67
 Bruner, J., 1, 36, 37, 40, 42
 Bryant, W., 54
 Bullying in schools, 51
 Burris, V., 5
 Butler, P., 60
 Butts, R.F., 101

C

Canning, E., 58, 59, 61
 Carnevale, A., 62
 Carnoy, M., 49
 Carroll, J.B., 75, 82
 Casad, B., 54
 Castells, M., 4, 7
 Caste-related discrimination, 69
 Cattell-Horn-Carroll (CHC), 74
 Cattell, R., 72, 74, 75, 77
 Chaiklin, S., 59
 Character education, 99
 Cherry, K., 81
 Children's literacy skills, 54
 Chmielewski, A., 60
 Christensen, C.A., 24, 29
 Churchland, P., 105
 Citizenship education, 96
 Civic ideology, 6
 Civic values, 97
 Civil, D., 55
 Classroom disciplinary climate, 18
 Classroom environment, 10, 48
 Classroom pedagogy, 98
 Clement, N., 105
 Clevenger, E., 71
 Cognitive constructivism, 40, 42
 Cognitive-contextual theories, 79
 Cognitive-contextual theories of intelligence, 74, 76
 Cognitive development, 14, 32
 Cognitive learning styles, 44, 57
 Cognitive psychology, 36
 Cognitive theories, 23
 Cognitive theories of intelligence, 74
 Cognitive view of motivation, 30
 Collaborative dialogues, 26
 Collaborative groups, 35
 Comenius (1592–1670), 5, 94
 Commodification of the self, 3, 7
 Comparative education data analysis, 110
 Conflict-driven environments, 53
 Constructivism, 36, 37, 46
 Constructivist learning, 43, 46, 50
 Constructivist learning theory, 38, 46
 Constructivist pedagogy, 18, 35, 42, 45, 50
 Constructivist teaching strategies, 39
 Constructivist learning, 103
 Cooperative groups, 43
 Copping, L., 78
 Core values, 94
 Corr, P., 73, 83

Council of Europe treaties, 95
 Crick, F., 73
 Critical literacy, 50, 107
 Critical thinking, 12, 36, 43, 49, 50
 Critical thinking skills, 117
 Crogman, H., 44, 58
 Cross-cultural constructs, 3
 Cross-cultural perspective, 63
 Crothers, L.M., 27
 Cultural assimilation, 62
 Cultural capital, 8, 15, 33, 53, 110
 Cultural differences, 118
 Cultural diversity, 12, 14, 42, 45, 48, 68, 107
 Cultural factors, 10, 88, 117
 Cultural homogenisation, 7
 Cultural identity, 5–7, 13, 15, 50, 53, 56, 92, 93, 96
 Cultural identity discrimination, 51
 Cultural values, 46, 63
 Culture, 94
 Cummings, W., 92, 94, 106

D

Dangel, J.R., 49
 Daniels, E., 17, 19
 Daun, H., 94
 Davidson, J., 74–76
 Davies, T., 38
 Deary, I., 71, 77
 Deci, E.L., 21
 Defining intelligence, 75
 Delors, J., 95
 Democratic schooling, 70
 Derman-Sparks, L., 56
 Dewey, J., 36, 37, 42
 Dialogical process, 38
 Didau, D., 81
 Differential intellectual abilities, 58
 Discourse analysis, 49
 Discourse of cultural identity, 5
 Discrimination, 52, 53, 56, 68
 Discriminatory attitudes, 53, 56, 69, 70
 Discriminatory practices, 52, 54, 68
 Divided classroom, 56
 Divided schools, 9
 Doll, W., 39
 Dominant ideology, 99
 Doolittle, P.E., 49
 Duchesne, S., 19–22, 76
 Dunn, K., 56
 Dunn, R., 44, 56, 57

E

Ecological mod, 96
 Economic capital, 8, 117
 Educational inequality, 15, 110
 Educational outcomes, 9, 118
 Educational stratification, 9
 Education quality debate, 118
 Effective classroom strategies, 32
 Effective engagement, 11
 Effective learning environments, 1, 13, 35
 Effective motivational atmosphere, 70
 Effective pedagogy, 12, 44
 Effective teachers, 12
 Effective teaching, 15, 19, 45, 50
 Eliza Doolittle, 67
 Ellsworth, D.H., 19
 Empowering pedagogues, 56, 70
 Engaging environments, 117
 Entwistle, N., 13
 Epicurus, 36
 Equality, 70, 107
 Equality of educational opportunity, 70
 Equity of access, 110
 Equity pedagogy, 118
 Erickson, E., 5
 Ethical theory, 98
 Ethnicity, 53, 56, 63
 Ethnicity research, 61
 Ethnocentrism, 60
 Ethnocentrism, prejudice, 56
 European Convention on Contact Concerning Children, 95
 European Convention on Human Rights, 95
 European Convention on the Exercise of Children's Rights, 95
 European Social Charter, 95
 Evers, A., 71
 Experiential learning, 42
 Extended Gf-Gc theory, 74
 Extended Gf-Gc theory of intelligence, 74
 Extrinsic motivation, 14, 19, 33
 Extrinsic reinforcement, 22
 Extrinsic rewards, 31
 Eysenck, H., 73, 75, 77, 83
 Eysenck, H.J., 19
 Eysenck, S.B.G., 19

F

Ferguson, R., 54, 61
 Finland, 50
 Fleming, N.D., 57

Fluid intelligence, 77
 Fontana, D., 21, 22, 45, 59
 Ford, V., 17, 18
 Fosnot, C.T., 38–40
 Framework of multiculturalism, 97
 Francis Crick, 74
 Francis Galton, 75
 Freakley, M., 104
 Freeman, K., 61–63
 Frost, R., 59
 Frydenberg, E., 14, 17
 Fry, R., 40

G

Gale, J., 38
 Gambrell, L., 13, 18
 Gardner, H., 44, 56, 57, 59, 72, 73, 76, 78–80, 87
 G-centric theories, 72
 Gellner, E., 6
 Gender, 63
 Gender differences, 54
 Gender discrimination, 55
 Gender identity, 5
 General intelligence, 71, 73, 77
 General intelligence factor, 85
 Geno-determinism, 88, 89
 Genotype, 83
 'G' factor, 84
 Ghazvini, S., 1, 2
 Gibbs, D., 93
 Giddens, A., 92, 93
 Gilbert, R., 102
 Gingell, J., 94, 106
 Gintis, H., 46
 Global comparisons (PISA), 109
 Global cultural identity, 7
 Globally diverse classrooms, 50
 Goal-directed behaviour, 25
 Goal orientations, 32
 Goal orientation theory, 25
 Goal theories, 23
 Goffman, E., 69
 Goicoechea, J., 38
 Golden Rule, 36
 Goldrick-Rab, S., 61
 Goleman, D., 84
 Good, E., 65, 67
 Gosa, T., 62
 Gottfredson, L., 71, 73, 82
 Graziano, S., 53, 68

Gredler, M.E., 41
 Green-Demers, I., 17
 Grigorenko, E.L., 71
 Grotty, J., 18
 Guay, F., 1
 Guilford, J., 44, 57, 79, 82, 87
 Guilford's cube, 79
 Gupta, N., 35
 Gurría, A., 115
 Guzzini, S., 37

H

Habermas, J., 92
 Habitus, 8
 Hall, S., 5
 Halstead, J., 92
 Hansford, B., 62
 Harackiewicz, J., 26
 Hattie, J., 9, 10, 62, 92
 Hawkings, J., 94
 Hawkins, J., 92
 Heimburge, J.A., 19
 Hein, G., 28
 Heredity, 88
 Herrera, L., 4
 Hicks, D.E., 49
 Hierarchy of needs, 4
 High-performing school, 67
 Himsworth, J., 55
 Hirtle, J., 40
 Historical thinking, 98
 Historiography, 98
 History Aptitude Test (HAT), 86
 Holt Government's Migration Law, 95
 Hou, S., 17
 Howarth, C., 68, 69
 Howe, K., 40
 Hughes, T.L., 27
 Human capital paradigm, 117
 Human genome, 73
 Human Genome Project (HGP), 73
 Humanistic psychology, 28
 Humanistic theory, 28
 Humanist teaching strategy, 28
 Human rights, 70, 100, 104, 107
 Human rights act 2019, 52
 Human rights of children, 95
 Hume, D., 5
 Hunter, W., 36
 Huntington, S.P., 96
 Hurks, P., 71

I

Identity, 4, 7, 63, 69, 96
 Identity of learners, 6
 Ideology, 7, 46, 93, 96
 Ideology of meritocracy, 70, 88
 Imakulata, M., 17
 Inclusive classroom, 11, 56
 Indicators of academic achievement, 15
 Individual differences, 56
 Inequality debate, 117
 Institutional identity, 5
 Intelligence, 53, 56, 59, 60, 71, 75, 76
 Intelligence differences, 77
 Intelligence discrimination, 58, 60
 Intelligence quotient (IQ), 77, 79
 Intelligence research, 72
 Intelligence testing, 53, 60, 71, 72, 84, 87
 Intelligence test scores, 59
 Intercultural dialogue, 63
 The International Association for the
 Evaluation of Educational Achievement
 (IEA), 97
 Intrapersonal theory, 25
 Intrinsic motivation, 14, 20
 Intrinsic rewards, 31, 32
 IQ discrimination, 60
 IQ test, 59, 82, 86

J

Jacobson, L., 66
 Jacobs, T., 59, 60
 Jensen, A.R., 75, 78, 82, 83
 Johnson, W., 71
 Johnston, O., 54
 Jonassen, D.H., 42

K

Kaagan, S., 112
 Karpinski, A., 17
 Kaufman, S., 75
 Kelly, G.A., 4, 20
 Kelly, M., 17
 Kemp, I., 74–76
 Kharb, P., 44, 58
 Kilcher, A., 19
 Kim, J.S., 35
 Kinsley, P., 61
 Kohlberg, L., 94
 Kolb, D.A., 40, 42
 Kosnik, C., 40, 41
 Krause, K.-L., 22
 Krischler, M., 54

Kukla, A., 40, 41, 47
 Kussrow, P., 53, 58

L

Labelling, 69
 Language, 40
 Language development, 40
 Language of meritocracy, 55
 Laryea, J., 1
 Learning goals, 24
 Learning modes, 57
 Learning strategies, 50
 Learning style, 43, 56, 57
Learning: the Treasure Within, 93, 95
 Legault, L., 17
 Lifelong learners, 34
 Ligorio, M.B., 6, 7
 Link, B., 69
 Liu, Y., 17, 23
 Locke, J., 5
 Lopes Soares, D., 71, 77
 Lovat, T., 105
 Luyten, H., 110
 Lyu, M., 8

M

Madani, R., 116
 Madon, S., 64
 Majhanovich, S., 4, 5, 50, 68
 Malvik, C., 57
 Margetts, K., 14, 20, 76, 81
 Maria Montessori, 36
 Marinak, B., 13, 18
 Marsh, C., 100, 103
 Marsh, H., 1, 2
 Marsh, H.W., 1
 Martin, A., 1, 2
 Martin, J., 41
 Martschenko, D., 54, 59, 77, 87
 Marx, 4
 Maslow, A., 4, 28
 Mastery-goal orientation, 25
 Mastery goal theory, 25
 Mastery skills, 45
 Materialistic culture, 7
 Matthews, G., 77
 Matthews, M., 38
 Ma, X., 18
 Maypole, J., 38
 McCaughey, A., 19
 McDonald, S., 6
 McInerney, D., 44

- McInerney, D.M., 19
 McInerney, V., 19
 McLeod, S., 28, 37, 80
 McMaugh, A., 22, 76
 Mead, G.H., 3
 Meaningful knowledge, 50
 Meaningful learning, 41, 42
 Meaning making process, 36, 42
 Meece, J., 17
 Meece, J.L., 22
 Melbourne Declaration (2008), 101
 Mental health, 69
 Meritocracy, 55, 89
 Meritocratic divisions, 89
 Meritocratic education system, 55
 Merton, R.K., 64
 Metacognition, 12, 43, 45
 Metacognitive skills, 39
 Meyer, D.K., 23, 33
 Mills, C., 57
 Minority, 46
 Minority students' performance, 59
 Modality preferences, 58
 Modelling, 27
 Models of intelligence, 74, 76
 Moral attitudes, 99
 Moral education, 93, 94, 98, 105, 106
 Moral standards, 93
 Morine, K.A., 27
 Motivation, 3, 13, 17, 19, 33
 Motivational atmosphere, 12, 14, 19
 Motivational strategies, 15, 45
 Motivational theories, 33
 Motivation spiral curriculum model, 33
 Muenks, K., 58, 59, 61
 Multicultural education, 96, 97
 Multiple intelligences (MI), 72, 76
 Multiple intelligence theory, 57
 Multi-sensory learning environments, 58
My Fair Lady, 67
- N**
 Nagdy, N., 110
 Napier, D.B., 4
 Narvaez, D., 105
 National Council for the Social Studies, 97
 National Framework for Values Education, 100
 National identity, 5–7
 Nation-building, 7
 Needs-based views of motivation, 29
 Negative reinforcers, 22
 Nelson, A., 61
- Neville, B., 23
 Non-discriminatory teaching, 68
 Non-verbal communication (NVC), 67
 Norm-referenced testing, 118
- O**
Obligations of citizenship, 101
 OECD, 8, 13, 15, 18, 38, 46, 50, 53, 109, 116
 Oldfather, P., 38
 O'Loughin, M., 40
 Olsen Edwards, J., 56
 Onuf, N., 40
 Operant conditioning, 21
 Ortiz-Ospina, E., 110
 Outcomes-based quality debate, 118
 Outcomes-defined policy, 14
 Overton-Healy, J., 13, 17, 18
 Ozdowski, S., 94
- P**
 Packer, M., 38
 Panadero, E., 2
 Passeron, J., 110
 Passeron, J.-C., 8
 Patrinos, H., 110
 Peel, K., 26
 Pegalajar-Palomino, M., 1
 Pelletier, L., 17
 Peng, B., 8
 Performance Assessment in Language (PAL), 84
 Performance Assessment in Math (PAM), 84
 Performance-based culture, 69
 Performance goals, 25
 Performance-oriented culture, 118
 Performance standards, 34
 Perry, R.S., 40
 Personality characteristic, 23
 Personality dimensions, 19
 Pestalozzi, J.H., 36
 Phelan, J., 69
 Phenomenological theory, 3
 Phenotype, 83
 Phillips, D., 38
 Piaget, J., 36, 38, 40, 42, 78, 79, 81, 87
 Pintrich, P.R., 22
 PISA, 2012, 15
 Pit-ten Cate, I., 54
 Placements tests, 60
 Plato, 36
 Pluralist democracy, 93, 101, 106, 107

Political capital, 94
 Positive classroom climate, 45
 Positive motivational atmosphere, 32, 45
 Positive reinforcement, 46, 47
 Positive reinforcers, 21, 22
 Positive self-regard, 4
 Postman, N., 38, 66, 67
 Power, C.N., 115
 Practical intelligences, 82
 Prejudice, 53, 62
 Prejudice in education, 53
 Programme for International Student
 Assessment (PISA), 114
 Psacharopoulos, G., 111
 Psychological constructivism, 40
 Psychometric theories, 73
 Psychometric theories of intelligence,
 73, 77, 87
 Puacharearn, P., 35
 Purkey, W., 1, 14
 Purpel, D., 93, 94, 99
 Pygmalion effect, 65

Q

Quality education, 115, 116
 Quality in education, 15, 110, 111, 116, 117
 Quality learning, 15, 70
 Quality learning for all, 50
 Quality of teaching, 11, 48, 50
 Quality outcomes for all, 70
 Quality schooling, 117
 Quality teachers, 50
 Quality teaching, 11, 117
 Questioning techniques, 10

R

Race, 53, 55, 61–63
 Racial discrimination, 62, 63
 Racial identity, 63
 Racial identity models, 63
 Racialisations in education, 62
 Racism, 56
 Rana, R., 19
 Rana, R.A., 19
 Rasheed, S., 115
 Rashid, S., 19
 Ready, D., 54
 Reciprocal determination, 27
 Reflexive meta-theory, 37
 Regime of truth, 89

Reification, 4
 Reification of culture, 4
 Reimer, D., 18
 Reinforcement, 21
 Reyes, I., 100
 Rezai-Rashti, G., 62, 63
 Richardson, V., 35, 38, 40, 42, 46, 49
 Rief, S.F., 19
 Rights of citizenship, 101
 Roby, D., 17, 18
 Rodriguez, J., 6
 Rogers, C.R., 3, 5, 28
 Rogoff, B., 80
 Rosenthal, R., 66
 Roser, M., 110
 Rothman, S., 79
 Rousseau, J.-J., 36
 Russell, J., 17
 Rust, V., 9
 Ryan, R.M., 21

S

Sadler-Smith, E., 44, 57
 Saeed, S., 17, 18, 32
 Saha, L., 8, 15
 Saha, L.J., 8
 Sánchez-Álvarez, N., 71
 Santrock, J.W., 27
 Scheerens, J., 110
 Schleicher, A., 114
 Schneider, W.J., 75
 Scholastic Aptitude Test Assessment
 (SATA), 84
 School environment, 10
 Schroeder, D., 44, 58
 Schunk, D.H., 22
 Searle, J.R., 41
 Sebor, J., 58
 Şekerci, H., 35
 Self, 3
 Self-awareness, 68
 Self-concept, 2, 8, 13, 15, 24, 28, 50
 Self-concept beliefs, 4
 Self directed behavior, 28
 Self-efficacy, 3, 4, 13, 14, 18, 20, 26, 27, 32,
 33, 45, 63, 69
 Self-efficacy construct, 18
 Self-esteem, 3, 4, 14, 20, 24, 25, 31, 32,
 62, 63, 69
 Self-fulfilling prophecy (SFP), 64–66
 Self-image, 3

- Self-reflection, 68
 Self-regulated learning (SRL), 2, 26
 Self-regulated learning strategies, 34
 Self-regulated test scores, 14
 Self-regulation, 27
 Self-worth, 69
 Self worth theory, 23, 24
 Senior, R., 12
 Senko, C., 25
 Sexual identity, 5
 Shah, R.K., 36
 Sharma, H.L., 35
 Sharma, L., 35
 Shively, J., 48
 Shor, I., 38, 92, 107
 Simon, T., 72, 77
 Singhal, P., 64
 Skinner, B.F., 21, 22
 Slavin, R., 11, 19, 56, 76
 Slavin, R.E., 19, 21, 29, 44
 Smith, A., 6
 Smith, D., 55, 57, 65
 Smith, J.B., 44
 Smith, M.S., 112
 Smolicz, J., 92, 93
 Snook, I., 98
 Snow, R., 84
 Snyderman, M., 79
 Social capitals, 8, 9, 15
 Social class, 53, 56
 Social cognitive theory (SCT), 27
 Social construction, 40
 Social constructivism, 40–42
 Social constructivists, 41
 Social constructivist pedagogy, 26
 Social factors, 10
 Social identity, 62, 96
 Social interaction, 26
 Socialisation, 96
 Socialisation process in schools, 62
 Social justice, 70, 100, 107
 Social justice discourses, 107
 Social learning approach, 30
 Social learning theory, 13, 18, 27
 Social stratification, 88, 89
 Socio-cultural concepts, 15
 Socio-cultural factors, 96
 Socio-cultural theory, 26, 41
 Socio-economic inequalities, 55
 Socio-economic status (SES), 18, 52, 53, 81
 Socrates, 36
 Solomon, P., 62, 63
 Sorensen, T.B., 112
 Sortkær, B., 18
 Souders, B., 13, 18
 Spearman, C.E., 72, 77, 85
 Specific ability factors, 85
 Standardised test scores, 15
 Standardized intelligence tests, 78
 Standardized testing, 78
 Standardized tests, 118
 Standards-driven reforms, 14, 118
 Standards of academic performance, 118
 Stanford-Binet Intelligence Quotient, 84
 Stanford-Binet Intelligence Scale, 77
 Stanford-Binet Scale, 76, 77
 Steffe, 38
 Steinmayr, R., 13
 STEM, 61
 Stereotypes, 62
 Stereotyping, 69
 Sternberg, R., 44, 57, 74–76, 78, 87
 Sternberg, R.J., 71, 79
 Stigma, 69
 Stoffers, M., 44, 58
 Strauss, V., 78
 Streaming' by ability, 60
 Structuralist perspective, 6
 Student motivation, 18
 Students, 46
 Students' academic achievement, 59
 Students' academic achievement goals, 50
 Students' academic performance, 54
 Students' achievement anxiety, 69
 Students' anxiety, 69
 Students' autonomy, 37
 Students' cognitive abilities, 53
 Students' cognitive development, 10
 Students' engagement, 14, 18, 36
 Students' identity, 69
 Students' learning strategies, 10
 Students' motivation, 53
 Students' performance, 116
 Students with special needs, 39
 Sugarman, J., 41
 Sullivan, A., 15
 Svinicki, M.D., 19
 Systemic discrimination, 51
- T**
 Tannock, S., 55, 56, 60
 Tatto, M., 92, 94
 Taylor, M., 92
 Teacher bias, 54
 Teacher Education Ministerial Advisory Group (TEMAG), 109
 Teacher efficacy, 11

Teacher quality, 109, 114
 Teachers' discrimination, 68
 Teachers' discriminatory attitudes, 53
 Teachers' expectations, 65
 Teachers' feedback, 10
 Teachers' self-efficacy, 13, 18, 45
 Terman, L., 77
 Theobald, M.A., 19
 Theories of intelligence, 72
 Thomas, A., 41
 Thompson, J., 54
 Thompson, P., 37
 Thorndike, E., 21
 3Ms of moral education, 106
 Tokan, M.K., 17, 23
 Toomey, R., 105
 Trebeau Crogman, M., 44, 58
 Trent, M., 53
 Triarchic Intelligence Model, 79, 82
 Triarchic Theory of Intelligence, 78
 Turner, J.C., 23, 33
 Turner, T.N., 104
 Tyagi, H.K., 35

U

Unconditional positive regard, 28
 UNESCO, 15, 110, 116
 UNESCO International Institute for
 Educational Planning (IIEP), 114
 UNICEF, 115, 116
 Universal Declaration of Human Rights
 (UN, 1948), 95
 USA, 15, 61
 Usher, A., 32

V

Value-added learning, 11
 Values, 2, 92, 95, 96, 98, 102
 Values education, 92, 94, 96, 97, 100, 102,
 104, 106, 107
 Values education research, 100
 Van den Bergh, L., 54, 61, 65
 van Ravens, J., 110
 VARK model, 57
 Verenikina, I., 113
 Vicarious learning, 27
 Virtues, 100
 Visible learning, 9
 Vogler, J.S., 19
 von Glasersfeld, 37
 Vygotsky, L., 59

Vygotsky, L.S., 26, 33, 37, 40, 49, 74,
 79, 80, 87

W

Watson, J., 40, 41, 73
 Wechsler, D., 85
 Wechsler Intelligence Scale for Children
 (WISC), 85
 Wechsler Intelligence Scale for Children
 (WISCIV), 84
 Wehler, M., 66
 Weiner, B., 17, 24, 25
 Weingartner, C., 38, 66, 67
 Weir, K., 60
 Weisenthal, J., 15, 110
 Wentzel, K.R., 17
 Wertsch, J.V., 40
 West, J., 38
 Whelan, L., 14, 18
 White Australia Policy, 95
 White, J., 38
 Wildhagen, T., 8
 Willms, J., 94
 Willms, J.D., 18
 Wilson, G.D., 19
 Winch, C., 94, 106
 Woodcock Johnson Test of Cognitive
 Ability, 84, 86
 Woods, P., 9
 Woods, R., 98
 Woolfolk, A., 14, 20, 25, 26, 76, 81
 Workman, E., 64
 World Bank, 110
 World Education Indicators (WEI), 15, 110
 Wright, D.L., 54
 Wyman, L., 100

Y

Ýavojová, V., 71
 Young, M., 55

Z

Zafar, S., 68
 Zajda, J., 1, 4, 5, 8, 9, 12, 14, 17, 19, 22, 24,
 26, 35, 36, 41, 44, 45, 48, 49, 52, 53,
 57, 61, 63, 68, 69, 71, 76, 84, 92–94,
 98, 99, 106, 110, 114, 116
 Zajda, R., 7, 116
 Zaphir, L., 36
 Zyngier, D., 17, 18, 32