In the following essay I intend to share some thoughts on the aims of education. I’ll also consider what I now call the three dimensions of intelligence (3DI). My theory concerning three-dimensional human intelligence was developed in collaboration with Professor Yoko Yamasaki, following several meetings with her at my school in London, and was first published in Japan in 2002.

I will also take this opportunity to mention an important book called The New Learning Revolution. It’s about learning, because in the final analysis our schools and universities have to be concerned with learning, and to recognise that sometimes our approaches to teaching stand in the way of effective learning.

This new approach to learning, this learning revolution, is currently taking place in several countries, including China. It’s happening in countries where there is an understanding that learning through creativity, and learning to be creative and imaginative, is essential in the 21st Century and the Age of the Internet.

This progressive approach puts pupils and their learning needs at the centre of the process, instead of making the curriculum, the acquisition of knowledge, and the passing of examinations, the main business of schools and universities.

Throughout the history of education, teaching and learning have been primarily or essentially about the handing down from masters to pupils a body of thought, or information, or knowledge. The first schools did this orally, and after the invention of writing systems they did it through texts and books.

After the invention of printing and the mass-production of books, mass education became possible. Public libraries gave the whole population the opportunity to have access to information on any topic. People could also afford to buy their own books.

In the age of the Internet people now need never leave home to have access to more information than they could possibly need or read in a lifetime. So do we still have need of schools? Some families think not, and choose to educate their children at home. We can consider the advantages and disadvantages of doing this.

To begin with, though, I’d like to consider the aims of education more broadly. And I’ll begin with the work of Percy Nunn, who was a leading educationalist, and also a leading progressive thinker and philosopher, in Britain during the early 20th Century.

Three clear aims of education, which Nunn thought could be agreed on by everybody, are:

* Consultant, 3Di Associates, Former Headteacher of Eveline Lowe Primary School, London, UK
“To form character”
“To prepare for complete living”
“To produce a sound mind in a sound body”

The key question that arises, I believe, is whether these things can be specifically and directly TAUGHT. Many people believe they cannot, at least not by using typical didactic teaching methods.

OR - can they be best LEARNED within certain educational contexts and settings, such as schools and universities? If so, how do we form characters? How do we prepare children for complete living? How do we produce people with sound minds? Can such things ever be directly taught? Or must they be learned by individuals in their own individual way?

The emphasis, I believe, must be on LEARNING, and how we best promote effective learning must replace the current fixation and emphasis on TEACHING. This is the key to understanding the educational revolution that was argued for by progressives like Nunn, and which seriously took root in England in Primary schools following the publication of the Plowden Report in 1966/7. Nunn posed these questions:

What kind of ‘character’ is it desirable to form?
What sorts of activities and behaviour comprise ‘complete living’?
What are the ‘marks of a healthy mind’?

Nunn pointed out that each of us will have our own individual answers to these questions.

Do we aim to produce adults who are obedient to authority, or who are prepared to question authority and become assertive of their own points of view? Do we promote a spiritual or a materialistic approach to living? Do we aim for a proper balance of all these attributes?

Nunn suggested that among educators and makers of educational policy there are “differences in educational faith and practice too radical to be harmonised, and too serious to be exposed to the public view”, and it is for these reasons, he says, that the “aims of education” have been kept deliberately vague since the beginnings of compulsory public education.

From a 21st Century perspective we would probably replace Nunn’s expression “educational faith” with the concepts of educational ‘philosophy’ and ‘ideology’. Nunn said, “It follows that there can be no universal aim of education if that aim is to include the assertion of any particular ideal of life; for there are as many ideals as there are persons. Educational efforts must, it would seem, be limited to securing for everyone the conditions under which individuality is most completely developed.

In Nunn’s view, every individual has the right to be and to become his or her own pure or true self, with his or her individual opinions, thoughts and ideas. According to Nunn, “Even the unheroic soul will best serve society by becoming more fully and truly himself.”

To have proper regard for the precious being that is the human mind/body/spirit “is the strongest bulwark of freedom and the firmest guarantee against the rule of violence”, said Nunn.
In our terms, and in terms of the 3D theory of intelligences, this can be taken to mean that a fully evolved human being, who is complete in terms of intellectual and also personal, social, emotional and spiritual intelligences, must be the ultimate goal of our educational systems.

Nunn recognised that there are people who might claim that these are impossible aims - those who might believe that to achieve these aims would require a “separate curriculum for every pupil” in order to produce students who have developed their full individuality in an atmosphere of freedom and self-direction.

Nunn countered this by saying, “Individuality develops only in a social atmosphere where it can feed on common interests and common activities.”

In our parlance this means that social and emotional and spiritual intelligences (empathy, self-control, intuition, etc.) are best learned, and in fact can only be learned, through interaction and collaboration with others, through common activities and experiences, in this case - educational activities.

Young children in particular learn by doing - that is, they learn best through taking part in meaningful and stimulating activities. Above all they learn more productively when participating with others in creative experiences and activities.

This is not only true for learning social skills and emotional skills. Even our individual minds and intellects are best developed through interaction - through discussion and debate - with others. This stands in sharp contrast to approaches to teaching and learning that insist pupils remain silent while focusing all their attention on the teacher, who is supposed to “transmit” knowledge.

In any case, social and emotional skills cannot be “taught” as such - they must be learned in a proper context, through meaningful activity and experience. As do thinking skills, leadership skills and creativity.

As for spiritual intelligence - it must be obvious that our capacity for intuition, our respect for ourselves and for others, and for life itself, cannot be directly taught.

Human values, indeed, can only be developed in institutions which themselves embody those values, where those values are demonstrated every day by the individuals who work and learn together in those places.

In the words of Nunn, again, “Freedom [to become one’s true self] is . . . the condition, if not the source, of all the higher goods”. “Freedom to conduct life’s adventure in his own way and to make the best of it is the one universal ideal sanctioned by nature and by reason.” “It offers the one possible foundation for a brotherhood of nations, the only basis on which men can join together . . . Hunger for it is the secret source of much of the restless fever of our age.”

Then as now.

Clearly, for Nunn, freedom to learn and to become our true individual selves is the highest ideal for us to take as our aim, as our “inspiration and guide in education”.

In my opinion our main aim as educators should be, first and foremost, to enable children to develop a love of learning and to want to be active learners and seekers of knowledge and wisdom throughout their lives. As old as I am, I am still learning.
I am learning about Japan. I would like to learn to speak Japanese. I am learning about Zen, Buddhism and Taoism. I would like to learn to play the guitar and the piano. I am learning how to edit digital video and create films and DVDs. I am learning to use the Internet for all kinds of purposes. I would like to become a better writer. I would like to become a better photographer.

I insist on the right to learn in my own way, according to my own interests and priorities, and at my own speed. Why shouldn’t children also have that right? If we are motivated to learn, and love learning for its own sake, then we will learn more and also learn faster. This was the idea of the pioneers of progressive education, and it’s the key to understanding what Gordon Dryden, Jeanette Vos and others are calling the New Learning Revolution.

As far as the content of the curriculum is concerned, children should have a major say in what they learn. It hardly matters WHAT they know. If they want to know more then they can find out from books and the internet. If they want to deepen their understanding they can engage with others in discussion and debate.

What matters is that they keep on learning because they love learning and because they have a thirst and a hunger for knowledge. If they have that motivation then there is no limit to what they can eventually achieve. So this must be one of our key aims of education - to stimulate and refine the intellect through gaining a detailed knowledge and understanding of the world.

But what do we know about ourselves? As Nunn says, how do we form and improve our character? How do we prepare for ‘complete living’, and for living successfully and peacefully with others? How do we ensure we have healthy minds and healthy bodies?

Having a high degree of intellect alone cannot help us with these aims. We are talking here about other intelligences, multiple intelligences, which we all possess to some degree, and some are better developed than others in these areas. So what are they? The 3DI model shown in Figure 1.

**Intellectual - - - - - - - - - - - - - - Instinctual**

This is the first axis of intelligence. Intellect and instinct are polar opposites.

As humans we possess both intellects and instincts. Animals have only instincts to guide them, but they also learn from direct experience and so they develop their instinctual intelligence. Humans are also capable of developing greater degrees of instinctual intelligence. Alternatively they can abandon most of their inborn instinctual intelligence if they operate entirely at the intellectual and rationalising end of the continuum.

**Emotional - - - - - - - - - - - - - Social**

This is the second axis. Our individual emotional drives and desires are the polar opposite of our feelings and concerns for others. Selfish desire, which we must learn to control and channel productively, is the polar opposite of, and also complimentary to, social intelligence, which enables us to consider the needs of others, to empathise with their concerns, and to form positive and caring relationships.
Physical - - - - - - - - - - - - - - Spiritual (Metaphysical)

This is the third axis. The physical and the metaphysical are polar opposites, and both are essential to our wellbeing and development. Physical intelligence enables us to use our precious gifts of the senses properly and productively - seeing, hearing, touching, smelling, tasting. Without these gifts to help us, we learn more slowly. Children who are unobservant and who do not listen well with good concentration are bound to learn more slowly. Education and training of these senses, these physical intelligences, must be a key aim in schools.

Spiritual intelligence involves the development of human values and the facility of intuition. Through the development of various practices, such as meditation, which help to calm and to clear the mind, we can make possible the facility of intuition - whereby original thoughts and solutions to problems can appear from within, without us knowing where they came from, as if by chance or good fortune or even 'miraculously'. Spiritual intelligence also causes us to value life, and never to deliberately cause harm or injury to others.

These three axes of intelligence intersect at their mid-points, in three dimensions. Through the development of these six intelligences we become our best possible selves, we make the most of our incredible faculties and abilities, and we become three-dimensional and not just two-dimensional human beings. The aims of education must include the development of all six types of intelligence, I believe.

If we are successful in developing all of our intelligences then the three aims that Nunn sets out will automatically be achieved. We will also enable our students to become autonomous, independent and individual beings, who are committed to their own lifelong development and lifelong learning. This must be our goal.

-------------------------------------------------------------

The New Learning Revolution

Consider this. The first time I visited Japan, in 2001, I didn’t even take my mobile telephone. There was no point. It couldn’t work in Japan. Nowadays wherever I go in the world I take my 'smartphone' with me. It enables me to contact anyone I wish to speak to from anywhere I might be. And vice versa. I can send and receive texts. I can send and receive emails. I can access the vast world of the Internet. It allows me to take and send digital photos and videos, to record and send conversations, to write notes, either using its keyboard, or by using a stylus to use handwriting on its screen. It will convert my handwriting to text. It’s a global positioning indicator. It’s a satellite navigator. It has maps, spreadsheets, a calculator, a diary, a calendar, a database creator, and it can run PowerPoint presentations. Most importantly of all it carries my music collection and will play my favourite music through headphones or through a hi-fi system, even using Bluetooth. It’s a computer and a multimedia device that fits in my pocket.

Eight or nine years ago such a machine was impossible for most of us to imagine, let alone purchase. Nowadays these machines cost very little to manufacture, and are given away free by telephone companies when you sign up for their service for 2 years. After one year the phone company will exchange this telephone, this microcomputer, free of charge, for a completely new and updated model.
That’s how fast the world, and the world of technology, is changing. We might like to imagine what sorts of machines, and what sorts of software, might be available to us in 10 years time. And what the consequences will be for those who cannot access such technology, or cannot learn how to use it creatively.

The subject matter of this book, and of The New Learning Revolution, is new ways to learn, teach, think, create and communicate. The New Learning Revolution is now the world’s biggest-selling non-fiction book. 10 million copies of this book have been sold in China alone. The Chinese government has completely retrained its teaching force in order for them to teach on the basis of these progressive ideas about learning and teaching. This was a massive project, and represents a radical and progressive break with their traditional methods of teaching.

Why do this? Because the Chinese government has understood that learning has to be a dynamic process, driven by the needs and wishes of learners to be responsible for their own learning and to become equipped with creative thinking and communication skills and tools. This stands in contrast to traditional models of education which are based on the acquisition of a specified body of knowledge and the ability to pass tests on one’s memory of that curriculum.

In a world where information is available day and night from a PC or laptop computer via broadband, or even a telephone connected by Wi-Fi (wireless broadband internet access) or 3G to the Internet, why should hundreds of millions of pupils and students be sitting silently and separately in rows of desks facing their teachers in classrooms designed for a different age? Very soon it will be possible for all advanced countries to provide every pupil with a cheap laptop computer. In eight or ten years time it will be possible for every pupil to own a pocket computer. Those who don’t possess this technology will be severely disadvantaged. I am quite sure that you as a student or as a teacher or professor wouldn’t want to stop using your computers.

Traditional schooling is breaking down. In Britain last year we heard that record numbers of pupils were being excluded from schools because of their undisciplined behaviour. Frankly, many of them are bored and cannot see the point in what schools are asking them to do. Not only are many teachers and schools offering little or no intellectual stimulation, and few opportunities to develop their creativity, they are also failing to provide learning in the social, emotional and spiritual intelligences.

In the foreword of this book The New Learning Revolution Christopher Ball, of Britain’s ‘Campaign for Learning’, says, ‘This book explains what is going on in the gradual collapse of the old model of education, and the advent of the revolutionary new models of learning’. He goes on to say, ‘The old school model is as dead as the industrial revolution that spawned it. The flight of both pupils and teachers from traditional schooling will soon become an embarrassment for governments in developed countries. Neither the curriculum (what is taught) nor the pedagogy (how it is taught) is any longer sustainable.” “What lies at the heart of this book is a shift of focus from teaching to learning, and recognition that a new philosophy of learning must lead the curriculum.”

In the 21st Century “the rewards of the good life will go to those who are most adaptable - who learn best. They will also go to those who learn to use and share the new world of interactive technology, instant communication, collaborative innovation and multimedia creativity.”

To that list I would add that the rewards and benefits will also go to those who learn to become emotionally, socially, instinctually, intellectually, physically and spiritually intelligent.
These are the clear goals of progressive education - an education that is needed for the 21st Century. These are the goals we must reach if we are to become a more creative, cooperative, sharing, peaceful and prosperous world society. These are the true aims of education.

References
(4) Gary Foskett, Key Issues for a 3 Dimensional Curriculum, ibid., 287.

Accepted date: 27th January 2010