



Ideologies and Functional Education for Sustainable Development in Initial Teacher Education at South African Universities

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Abstract

Every state needs a functional education system for sustainable development based on its ideology, from pre-primary to higher education, for its citizens. Education for sustainable development aims to empower individuals with the knowledge, skills, and values needed to protect the planet. In contrast, an ideology is a set of ideas, beliefs and attitudes, consciously or unconsciously, reflecting or shaping understandings or misconceptions of the social and political world. Due to changes and disruptions in education and other sectors of society globally, and because of technology and climate, functional education has the potential to contribute significantly towards sustainable development. The paper explores whether universities' initial teacher programmes have modules with elements of education for sustainable development at two Limpopo universities. The paper was underpinned by the theoretical frameworks of ideology by Joseph S. Roucek in 1944 and the theory of change (TOC), the theory of education for sustainable human development (TESHD), and a theory of transformative learning (TTL) by Jack Mezirow. This is a qualitative design paper where documents from both universities were analysed. Document analysis involves reviewing and evaluating electronic and physical (computer-based and Internet-transmitted) documents to interpret them, understand their meaning and develop upon the information they provide. Like many other qualitative research methods, document analysis involves examining and interpreting data to uncover meaning, gain understanding, and come to a conclusion. Like other analytical methods in qualitative research, document analysis requires that data be examined and interpreted to elicit meaning, gain understanding, and develop empirical knowledge. Interviews were also conducted with two participants, each from both universities. The education for sustainable development does not form part of the curriculum. The paper calls for reformulating South Africa's ideology in initial teacher training to align with Education for Sustainable Development, SDGs 1 (no poverty), 2 (zero hunger), 4 (quality education) and 13 (Climate change), and Agenda 2063, Africa we want, fostering a better future for all.

Keywords

Education for Sustainable Development, Ideologies, Initial Teacher Programmes, Functional Education, Global Challenges, Transformative Pedagogies

INTRODUCTION

From the angle of comparative education, we talk about education systems. A national education system is a social structure with qualities and characteristics that give it a unique nature and identity (van Schalwyk, 1995). The education system has four components: education system policy, education system administration, teaching structure and support services (Steyn & Wolhuter, 2008). Its uniqueness is based on the objectives, ideology and beliefs of the state. In other words, the education system is developed according to the state's ideology and beliefs. Education systems reflect and are shaped by ideological and organisational processes at the individual, group, societal and even world levels (Fiala, 2007). The curriculum (teaching structure) as a component of the education system is never neutral; it reflects the ideological positions of the education system (the state). It is at the core of education on the macro, meso, and micro levels and is influenced by various forces (du Toit, 2016). Ideologies within the curriculum are negotiated and formulated through multilayered strategic compromise, assent, and resistance processes. As such, the curriculum ideologies become operationalised in overt and hidden curricula. When a curriculum has been designed according to the ideology, there is a teaching component, which is always a political act (Crowley, 2021). In addition to what Fiala (2007) has stated, Crowley

(2021) adds that curriculum ideologies manifest in terms of what might be thought of as values, visions of the future, and venues or forms. In other words, a curriculum is imbued with processes for valuing its design, development, and implementation. The curriculum's ideology is also based on political, economic, historical, sociocultural and psychological assumptions.

Crowley (2021) believes that the curriculum is the guiding principle in conveying knowledge through a system of organisation related to an outset purpose with a vision of a future. The ideology determines the functionality of education. Initial teacher education (ITE) provides programmes that develop students' knowledge, competencies, values, and attitudes. The paper explores whether universities' initial teacher programmes have modules related to education for sustainable development at two Limpopo universities. The ideology and beliefs of the South African education system are more about transformation (Teise & le Roux, 2016) than education for sustainable development. Education for Sustainable Development includes critical sustainable development issues such as climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption in teaching and learning.

LITERATURE REVIEW

The following paragraphs review the literature, including the theoretical framework.

Ideologies

The first question this paragraph wants to answer is what ideology is and how it shapes society. Kumar (2023) argues that ideology shapes society like the invisible hand. An ideology represents the sum of the state and its people's beliefs, values, and cultural norms. It often operates unconsciously and subtly, guiding how the state and its people see the world and interact. Ideologies are not static; they evolve and are influenced by historical and social contexts. Ideology is far more than abstract theory; it is a living, breathing force that shapes the education system and society. When society understands ideology, it is not surprising when dealing with curriculum, as it is not just a collection of subjects to be taught and learned but a reflection of the power structures and values governing our world. This awareness is the first step towards creating a more equitable and inclusive society.

Kumar (2023) goes on to identify three roles of ideology in society:

- **Shaping worldviews:** Ideologies provide a framework for interpreting the world. From politics to economics, ideologies influence the opinions and actions of society.
- **Influencing social organisation:** Ideological beliefs underpin the structures of society, such as institutions and social hierarchies. These beliefs justify and maintain the organisation of society.
- **Perpetuating power dynamics:** Ideologies often serve to maintain the status quo, particularly the power of dominant groups. By naturalising specific ideas, ideologies can make inequalities seem inevitable or 'natural.'

In the article "Ideological Power in Education," Laursen (2006) argues that ideological power plays an essential role in education. It is part of a general trend in policy and social sciences to underestimate ideological and overestimate the role of political and economic power.

The ideology in South Africa influences the curriculum, too. Even if it is not stated, it is understood as the transformation and social justice curriculum. The curriculum is, in a way, covering past injustices to build an equal society.

Functional Education

All developed nations are where they are because of their functional education systems. Functional education plays an essential role in a society's political and socioeconomic development. It is an instrument of excellence for the development of any individual or nation. It levels opportunities for all citizens in the state. Thus, no responsible government would neglect its education system (Afolabi, 2024).

(Yehudah) in Zeilberger (1961) states that in the US and Germany from around 1920, "functional education" refers to education that comes spontaneously from the influence of the environment. It is "natural" education, which is different from the deliberate, goal-oriented education that a man directs. He added that in Western Europe, "functional education" refers to education that comes from the child's needs and uses the child's interest to activate them towards their desirable activities. Its purpose is to develop the life of the mind, which acts from the wholeness of organic life concerning practical life in the present and the future.

In the '90s, Vries (1994) posits that functional education highlights practice more than theory and stands for utility and practicality. Maduegbunam and Kafor (2014) and Ayaode and Thota (2023) define functional education as emphasising the ability to carry out productive tasks rather than education that intends to produce ideological conformity. Societal transformation is brought about by education only when it is functional. Nwaka (2022) argues that functional education is practical and useful and addresses the individual beneficiaries' and society's needs and interests. The recipient of functional education on completion can find it helpful to them and society, as they have been equipped with the relevant knowledge and skills needed to perform productive tasks. Therefore, functional education, in its total consideration, is not the process of acquiring knowledge and skills. It is more encompassing, meaningful, interactive, practical and, most importantly, desirable.

South African education system is not exceptional in terms of enriching its citizens. Its education should be functional in equipping all its citizens for political and socioeconomic development by acquiring the needed knowledge

and functional skills to perform productive tasks for proper functioning in society. As stated before, all developed nations are where they are because of their functional education systems.

Education for Sustainable Development

Education for Sustainable Development includes critical sustainable development issues such as climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption in teaching and learning.

Within the UN framework, Education for Sustainable Development (ESD) relates to two distinct areas of core interest for the United Nations:

- Quality basic education and
- Sustainable development.

This is linked to a concern for human environment development relations. Building on a 30-year history of environment and development education, the United Nations Decade of Education for Sustainable Development (UNDESD) (2005–2014) was proposed and accepted at the World Summit of Sustainable Development in 2002, where the Johannesburg Declaration of Sustainable Development (UN, 2002) was issued.

In December of the same year, the UNDESD was adopted by the UN General Assembly through resolution 57/254, with UNESCO designated as the lead agency (UNESCO, 2009a). According to UNESCO, the Decade's specific goals are to facilitate networks and bonds among activists that defend ESD, improve ESD teaching and learning, and help countries to adopt Sustainable Development Goals (Wals & Kieft, 2010).

Wals (2021) refers to Education for Sustainable Development (ESD) as all teaching, learning, and capacity building to develop a citizenry that can live sustainably on the earth. It focuses on learning processes and learning environments that can foster the qualities and competencies people need to contribute to more sustainable forms of being. Typically, these qualities and related competencies include caring, mindful, respectful, compassionate, and critical in the way people relate to each other elsewhere and future generations, but also to other species; systems thinking; dealing with uncertainty and (eco)anxiety; moral reasoning; anticipatory thinking; and the ability to make change.

According to UNESCO, Education for Sustainable Development (ESD) empowers people with the knowledge, skills, values, attitudes, and behaviours to live in a good way for the environment, economy, and society. ESD is a powerful strategy to transform education, covering what people learn, how they know, and the environment in which they learn. It is a lifelong learning process that is an integral part of a quality education. It encourages people to make intelligent, responsible choices that help create a better future for everyone. Education for Sustainable Development (ESD) sees education as the key to unlocking progress in all global development goals. It teaches individuals to make informed decisions and act individually and collectively to change society and protect the planet. It equips people of all ages with the knowledge, skills, values, and ability to tackle issues such as climate change, biodiversity loss, overuse of resources, and inequality that impact the well-being of people and the planet.

ESD advocates for learning that is:

- Cognitive: Improving how people think and understand information.
- Socio-emotional: Building social skills, empathy and emotional intelligence.
- Behavioural: Encouraging positive actions and behaviours.

In South Africa, Teis and Le Roux (2016) emphasise that Education for Sustainable Development is an educational approach that promotes sustainability by catalysing social change. Although South African education policy and practice appear to be oriented towards ESD, the concept is contested and vague.

Initial Teacher Education (ITE)

Initial teacher education (ITE) is a crucial stage of a teacher's professional journey. It lays the foundations of a professional mindset and gives the new teacher an essential toolbox to make meaningful learning happen in the classroom (Caena, 2014).

Caene (2014) further argues that initial teacher education is an intensive experience requiring student teachers to simultaneously be both learners and teachers, being supported in learning how to teach and supporting learners how to learn. It is demanding intellectually, as it requires analysing, questioning and reviewing ideas in the context of practice. It involves the whole person's attitudes, beliefs and emotions. The first and foremost resources teachers use are themselves; their characteristics can be catalysts for their own and others' learning, as much as their knowledge and competencies.

Initial teacher education cannot be divorced from teacher education, which has three parts: initial teacher education, induction programmes, and professional development (Musset, 2010). All over the world, teacher education is considered, and teacher education policy is structured as a continuum of teacher learning that goes from the beginning of teachers' schooling to the end of their teaching career. This continuum comprises the formal preparation teachers receive and the informal influences on how and what they learn to teach.

Minimum Requirements of Teacher Education Qualification (MRTEQ) (2015) defines initial teacher education as preparation, which is the first step in the continuum of teacher learning and marks the professional development process's beginning, not the end. Professional development involves considering teacher education as a continuous process, starting with attracting and selecting candidates, equipping them with the necessary competencies through quality training, certification, and registration (SACE in South Africa), and supporting their early school or career development. The

primary purpose of all Initial Teacher Education (ITE) qualifications is to certify that the holder has specialised as a beginner teacher in a specific phase and subject.

The MRTEQ Policy gives South African institutions that offer initial teacher education training a uniform level of qualification and control the overall education provision in the country. The initial teacher education qualifications offered in South Africa are a postgraduate certificate in education (PGCE) and a B.Ed. Foundation Phase Teaching, B.Ed. Intermediate Phase Teaching and Senior Phase and Further Education and Training Teaching. The Minimum Requirements for Teacher Education Qualifications Policy serves as a basis for developing and updating the Criteria for the Recognition and Evaluation of Qualifications for Employment in Education policy for teachers in the schooling sector.

Theoretical Framework

The paper was underpinned by the theoretical frameworks of ideology by Joseph S. Roucek in 1944 and the theory of change (TOC), the theory of education for sustainable human development (TESHD), and a theory of transformative learning (TTL), developed by J Jack Mezirow.

Theoretical Framework of Ideology by Joseph S. Roucek in 1944

Joseph S. Roucek, in his paper entitled "History of the Concept of Ideology," defines ideology as a distinctive type of human thought that has emerged as one aspect of "The Sociology of Knowledge." Ideology is strictly a system of ideas elaborated in the light of certain conceptions of what ought to be. This means that every social group has its liberal bourgeoisie, such as developing its conceptual apparatus, certain peculiar methods, and a specific "style" of thinking adapted to its social position.

Ideology designates a theory of social life that approaches the facts from the point of view of an ideal and interprets them, consciously or unconsciously, to prove the correctness of its analysis and to justify that idea. Every ideological construction involves the projection of a particular ideal into the future and the evaluation of the present and the past.

Ideologies contain programmes for the future improvement of society (the community, the nation, the state or the world), together with unscientific explanations of social facts, so interpreted that the desired future state is covertly or overtly scheduled to come about either logically morally or from the point of view of natural laws.

Theory of Change (TOC)

The Aspen Round Table developed this theory. It was developed due to increasing policy evaluations in the UK (Aspen Institute, 1997). It was devised to meet the need for an evaluative approach to accommodate the multi-level and many-dimensional impacts of developing social and public policy interventions. In such initiatives, linking action to outcomes was highly complex, and existing evaluative approaches were considered inadequate or inappropriate.

Theory of Transformative Learning

Jack Mezirow founded the theory of transformative learning in 1978. Mezirow (1990), (1991), (1995), and (1996) discuss transformative learning as an orientation that holds the way students interpret and reinterpret their sense of experience, which is central to making meaning and, hence, learning. Transformative learning has two fundamental focuses: instrumental and communicative learning. Instrumental learning focuses on task-oriented problem-solving and evaluation of cause-and-effect relationships, whereas communicative learning focuses on how people communicate their feelings, needs, and desires. He goes on to discuss the phases of transformative learning theory. The phases are vital in helping adult education students transform their prior notions as they get new information and insight:

- A disorienting dilemma is when students find that what they thought or believed in the past may not be accurate. It can be uncomfortable or challenging for students, but it is the critical spark in starting a fire of transformational learning.
- Self-examination is a disorienting dilemma; students self-evaluate their beliefs and understanding. Students think about their past experiences and how they connect to this disorienting dilemma. This can create a perspective transformation, where students understand that their perspective may not be the only perspective.
- Critical assessment of assumptions is when students in this phase of transformational learning can take a more comprehensive look at their past assumptions and review them critically. They can accept that perhaps some of their past assumptions were wrong and are more open to new information and thoughts. This creates perspective transformation as they can look more unbiased at their past.
- Planning a course of action is when students understand how their past assumptions and beliefs may have been wrong and have a perspective transformation; they can plan a course of action. They can consider what kinds of learning they need to understand a problem or situation more fully. They will be able to have a strategy for learning new things, seeing new perspectives, talking to new people, and more.
- Acquisition of knowledge or skills to carry out new plans is the time for students to carry out their plans and advance in their transformational learning. They may have to learn new things and consider different perspectives to enhance their learning fully. This may take extensive work and effort, but this is where real learning happens.

- Exploring and trying new roles. As part of transformational learning, we need to act. In transformative learning, exploring and understanding changes is critical to success. It goes beyond just learning about something; it means actively working to understand and experience new things for yourself.
- Building self-efficacy in new roles and relationships. Self-efficacy involves us being able to make our own decisions and have our own beliefs. As we follow transformative learning phases, it is crucial to build confidence in our beliefs and understanding and to continue to practice this transformative cycle as we move forward.

The Theory of Education for Sustainable Human Development

Education for Sustainable Development includes climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption in teaching and learning. Education for sustainable human development is an educational practice that enhances human well-being, conceived in terms of expanding individuals' agency, capabilities, and participation in democratic dialogue for now and future generations.

Schrage and Lenglet (2016) give insights into the pedagogical practices that support the Theory of Education for Sustainable Human Development, focusing on dialogue and deliberation. They further elucidate how certain ESD-related practices can lead to a new understanding of complex, interconnected, and wicked sustainability issues.

METHODOLOGY

This is a qualitative design paper where documents from both universities were analysed. Document analysis involves reviewing and evaluating electronic and physical (computer-based and Internet-transmitted) documents to interpret them, understand their meaning and develop upon the information they provide (Corbin & Strauss, 2008). Like many other qualitative research methods, document analysis involves examining and interpreting data to uncover meaning, gain understanding, and come to a conclusion. Like other analytical methods in qualitative research, document analysis requires that data be examined and interpreted to elicit meaning, gain understanding, and develop empirical knowledge. Interviews were also conducted with two participants, each from both universities.

DISCUSSION

According to van Schalwyk (1995), everything exists in time, whether past, present or future. Every practice, political, economic, social life, language, culture and education has influenced the present and future of the state. The politics of transformation influence the South African education system. Van Schalwyk (1995) states that the state determines legal and educational relationships as the state is legislative, executive, and judicial. The education system of South Africa has transformed from apartheid to democratic policies.

According to the Department of Education (DoE, 2001), as cited by de Wet and Wolhuter (2009), education plays a role in overcoming the apartheid policy. It provides a system of education that builds democracy, human dignity, equality and social justice. To achieve transformation in education, the focus was on the following:

- The creation of a single, non-racial education dispensation wherein there is space for all participants.
- The entire overhaul and democratisation of education management.
- The upgrading and improvement of the education infrastructure.
- The transformation of curricula to eradicate the legacy of apartheid in the system (Duvenhage, 2006) as cited by (de Wet & Wolhuter, 2009).

After democracy, the focus and ideology of the South African education system have not yet transformed from transformation to Education for Sustainable Development. As everything exists in time, whether past, present or future, the present and future would be appropriate to include Education for Sustainable Development. This is because of the devastating climate change, which affects everybody throughout the globe.

At the dawn of democracy, education transformation was also singled out for specific attention, including eradicating discrimination. Education not only had to be transformed, but it also had to play a critical role in transforming South African society (de Wet & Wolhuter, 2009). After democracy, the introduction of the National Education Policy of 1996, the South African Schools Act of 1996 (BELA), and the Employment of Educators Act of 1998 symbolised the transformation of basic education. Basic education is equated to primary education. The Higher Education Act of 1997 transformed the former racially divided higher education. The democratic state has established the will of the people regarding education.

The findings from the participating Limpopo universities that offer initial teacher education qualifications concur with the above discussion, which states that education in South Africa is based on transformation rather than Education for Sustainable Development. The universities have two initial teacher education programmes or curriculums, the Bachelor of Education in Foundation Phase Teaching and the Bachelor of Education in Senior Phase and Further Education and Training Teaching. They also offer the Postgraduate Certificate in Education. The study concentrates on the Bachelor of Education in the Senior Phase and Further Education and Training Teaching.

Bachelor of Education in the Senior Phase and Further Education and Training has an average of 350 modules, which are compulsory and elective from the first to fourth year. Of all these modules, no module addresses Education for Sustainable Development. Participants were sceptical about whether the Geography, Natural Sciences and Life Sciences modules have an element or component of Education for Sustainable Development.

Original documents of Bachelor of Education in the Senior Phase and Further Education and Training programmes were analysed. The programme has more than 365 modules. All modules in the programme at both universities do not have an element of Education for Sustainable Development in their content.

Four of the participants from the two identified universities in the Limpopo Province unanimously agree that the Bachelor of Education in the Senior Phase and Further Education and Training do not have an element of Education for Sustainable Development.

Participants from the University of Limpopo:

We agree that the South African education system is based on the ideology of transformation. Education for Sustainable Development is something far-fetched, which is why we never thought of including it in our programme. We do not think our programme has embedded an element of Education for Sustainable Development. Maybe on some modules, but we do not think there is any. We know this because we were part of developing this programme. But we will verify.

Participants from the University of Venda:

We agree that the South African education system is based on the ideology of transformation. Prof, you know, you were part of developing this programme. We were in a hurry to catch up on the accreditation of the programme, as we were behind by a year or two in having it accredited by CHE. We did not have time to think about Education for Sustainable Development. We only thought of the HIV-AIDS element as it was there in the phased-out programme (before 2020). Even HIV-AIDS is not a standout module in the programme, it has been infused in one or two of the modules in the Senior Phase and Further Education and Training Teaching.

We will suggest infusing the element of Education for Sustainable Development in the programme during review processes, as it is a very important aspect in the education system.

The lack of modules with the element or component of Education for Sustainable Development minimises opportunities to meet the Sustainable Development Goals (SDGs). SDGs 1 (no poverty), 2 (zero hunger), 4 (quality education) and 13 (climate change), and Agenda 2063, Africa we want, fostering a better future for all. This also defeats the National Development Plan: Vision 2030. The National Development Plan: Vision 2030 states that part of South Africa faces challenges of drought, which will worsen in thirty years. Rising temperatures and rainfall change patterns threaten food production and water supply. The impact of climate change is global and affects South Africa (National Planning Commission, 2013). The initial teacher educators were supposed to be aware of all this and how to disseminate it to their students after completing their degree. If programmes are not reviewed to accommodate Education for Sustainable Development, problems that include environmental issues such as climate change and biodiversity loss, poverty, security, and governance shall persist as implementing solutions have been very slow (Mashau, 2023).

Lotz-Sisitka (2004) states that sustainable development (environment, society and economy) is a key 'driver' of change processes worldwide and has been widely adopted as the solution to contemporary socio-ecological, socio-political, socio-economic and other problems experienced by humanity in the 21st century.

After thirty years of democracy and 13 years of a case study on Teacher Professional Development with an Education for Sustainable Development Focus in South Africa: Development of a Network, Curriculum Framework, and Resources for Teacher Education by Prof Lotz-Sistka, universities that offer training on initial teacher education should have incorporated Education for Sustainable Development in their curricula. The universities have not yet incorporated education for sustainable development in their curriculum. It is scattered in Foundations modules, such as Philosophy of Education and Sociology of Education.

Teacher education has been identified as a key priority for Education for Sustainable Development (UNESCO, 2009). In the case of the national study by Lotz-Sistka (2011), the fundamental principles of Education for Sustainable Development (ESD) are the environment, society, and economy. Environment, society and economy were incorporated into the National Curriculum Statements (NCS) for General Education and Training (GET) and the Further Education and Training (FET) National Curriculum Statement for Schools (Grades R–12) in 2007 in post-apartheid curriculum transformation in South Africa. What she mentioned is best captured in the principle of the NCS, which was before CAPS in 2012, which requires all schools and teachers to ensure that the relationship between a healthy environment, social justice, inclusivity, and human rights is incorporated into the curriculum and teaching and learning activities. The national case study was to report on developing a national network, curriculum framework and resources for teacher education, specifically focusing on the inclusion of environment and sustainability also known as education for sustainable development – in the South African teacher education system. The case study reviewed and reported on the history of the environment and sustainability education in teacher education and notes that the previously numerous efforts to strengthen environment and sustainability in teacher education have failed to make a systemic impact and have suffered from a range of quality-related problems which have paradoxically been reproduced through ongoing reliance on similar concepts and approaches. From this, the national case study begins to conceptualise a new approach to Environment and Sustainability Teacher Education within a new curriculum policy environment and a new teacher education and development policy environment. Unfortunately, this has no impact on initial teacher education in Limpopo universities.

The National Environmental Education Programme (NEEP) was oriented towards building system capacity for implementing the environment, society, and economy of the NCS. The NEEP supported the emergence of the Education for Sustainable Development Strategy in South Africa. However, it concentrated more on piloting models for the professional development of subject advisors at the district level than on formal teacher education programmes.

Based on this argument, initial teacher education was supposed to have the Education for Sustainable Development component, which was introduced during NCS as per the case study. It would be difficult to erase the transformation ideology in the South African education system. One of the phases of Transformation in the Theory of Transformative Learning alludes to a disorienting dilemma when students find that what they thought or believed in the past may not be accurate. It can be uncomfortable or challenging for students, but it is the critical spark in starting a fire of transformational learning. Even though it is difficult to erase the past ideology, South Africa's education system ideology should be reshaped. Ideologies are not static; they evolve and are influenced by historical and social contexts (Kumar, 2023).

CONCLUSION

The paper explores whether universities' initial teacher programmes have modules with elements of education for sustainable development at two Limpopo universities. The paper was underpinned by the theoretical frameworks of ideology by Joseph S. Roucek in 1944 and the theory of change (TOC), the theory of education for sustainable human development (TESHD), and a theory of transformative learning (TTL) by Jack Mezirow. This is a qualitative design paper where documents from both universities were analysed. The paper calls for reformulating South Africa's ideology in initial teacher training to align with Education for Sustainable Development, SDGs 1 (no poverty), 2 (zero hunger), 4 (quality education) and 13 (Climate change), and Agenda 2063, Africa we want, fostering a better future for all.

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