

COMPREHENSIVE PROCESS AND FRAMEWORK FOR SUSTAINABLE SYSTEM-WIDE CHANGE IN EDUCATION: A LITERATURE REVIEW

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Abstract: Owing to the inherent nature of change within the educational landscape across all tiers, from grassroots school communities to district, state, and national levels, this paper outlines a robust conceptual framework and process for facilitating sustainable system-wide reform in education. The paper highlighted that while change can occur either on a piecemeal or system-wide basis, the most impactful change tends to be system-wide. System-wide reforms impact not only the learning experiences but also the organisational and governmental protocols governing the entirety of the educational structure, encompassing the learning environment, infrastructure, community involvement, and the jurisdictions of local/districts, state/province, and federal/national authorities. Sustainable system-wide transformation offers a model for inclusive change, relying on grass-roots-initiated efforts within its framework. Stakeholders guide system-wide reform efforts through continuous partnership and shared ownership. The theories, workshops, conferences, empirical research, and real-world experiences obtained through the assistance of system-wide change proponent experts are construed and analysed in this paper. This paper provides the process and conceptual framework for the introduction and implementation of a functional and sustainable system-wide change for education reform facilitation and researchers who want to explore a sustainable system-wide change process. Along with providing information on how to start and maintain a system-wide change process, the paper also explains to all stakeholders in education the types of undertakings and support essential for a system-wide change to be successful and sustainable.

Keywords: Sustainability; System-wide change; Reform process; Learning organisation; Educational change; Educational stakeholders

Introduction

Change is an unavoidable facet of all human endeavours. The dynamic nature of the human sphere, which encompasses the environment, societal needs, governance, and policies, keeps changing. Therefore, the realm of education cannot remain stagnant. In educational contexts, the quest for significant reform has persistently remained unchanged, and it will remain so in the future (Dueppen & Hughes, 2018). As human endeavours progress, it becomes imperative for the educational system to also evolve in order to maintain relevance and functionality. A static educational system will not only become irrelevant to the end-user, but it will also be a tool for blindfolding, setbacks, misdirection, poison, damage, low productivity, substandardness, and inequalities for an individual and the nation at large (Boyce, 2019). It has been vehemently argued that the educational standard determines the development of a nation. Oladotun (2022) asserts that no country can grow beyond the standard of its educational system. Considering the significance of educational reform in meeting the needs of the ever-changing world, there is a need to critically explore

the process and conceptual framework for introducing and implementing a sustainable system-wide reform in education.

Change in educational settings needs to adhere to the principle of sustainable system-wide change in order to be effective. This paper draws its insight from literature reviews based on educational reform, empirical research, and experiential reports. In order to make an informed conclusion about the topic under examination, researchers can familiarize themselves with past and current theories and studies in their field of study by doing a literature review (Ridley, 2012). Furthermore, a literature review facilitates the contextualization of a study and allows a researcher to interact with and incorporate the relevant literature.

The main concepts that have come out of the proponents, eminent academics, pioneers, and seasoned facilitators of sustainable educational system-wide reform and from previous system-wide transformation case studies and models of educational transformation are summarized in this paper. The conceptualisation of system-wide change, its different manifestations, and the importance and forms of system-wide change in educational contexts are all covered in the paper. The discussion culminated in an exploration of the conceptual framework underpinning the principles of sustainable educational system-wide change. These insights were derived from a synthesis of theories, seminars, workshops, conferences, and hands-on experiences facilitated by experts advocating for system-wide change.

Concepts of System-wide Change

The act of reforming a thing, someone, or a system's shapes or functions is known as change (Sengeh & Winthrop, 2022). Change might be made piecemeal or systemically. Piecemeal change consists of modifying the existing standard, while system-wide reform comprises changing the current paradigm entirely (Reigeluth & Duffy, 2019). A system-wide intervention targets the entire system rather than just a small portion of it. From the standpoint of systems thinking, system-wide refers to a reform that originates from the framework of the system and influences the system's overall performance rather than just one of its organs (Sullivan et al., 2015). A reform that affects most or all of a system's components while taking into account their interdependencies and relationships with one another is referred to as a system-wide change. As a result, it influences the overall behaviour of the system, making adjustments to the other components necessary at the same time (Connolly, 2017). Put another way, system-wide change is defined by Stouten et al. (2018) as a purposeful effort aimed at disrupting the existing state of affairs by adjusting the framework or function of a particular system, aiming to instigate enduring change by altering fundamental elements like resources, routines, policies, power dynamics, values, and relationships that enable the system to operate in a specific manner. Because of the system's inherent interconnection, system-wide change offers a structure for a comprehensive paradigm shift that entails focusing on each component of the system (Sullivan et al., 2015).

According to Lawton and Pratt (2022) system-wide reform is a school of thought that focuses on creating a whole new system as opposed to attempting to fix one that has never been intended to handle the realities, difficulties, or procedures it presently encounters. System-wide transformation in education is defined by Menchaca et al. (2003) as an all-encompassing strategy for altering the core values, attitudes, and beliefs about education

and educational institutions in the framework of a dynamic, interrelated, and complex society. Fullan (2009) asserts that changes in educational settings that affect the system as a whole, comprising the learning environment, structures, communities, district/local, provincial/state/regional, national/federal government levels, and the administrative and governmental procedures that direct the system as a whole, are referred to as system-wide changes. Sengeh and Winthrop (2022) posit that system-wide transformation in education refers to various community members cooperating to enhance and support children's learning. This suggests that to enhance a sustainable reform process in education, the views and contributions of all stakeholders—including employers, instructors, students, parents, and the community—must be taken into account (Jenlink et al., 1998; Oloba, 2023).

A fundamental shift that impacts every facet of a school system is known as system-wide change (Gouëdard et al., 2020). This implies that any attempt to implement change that does not take into account every aspect of the system will fail. System-wide change could therefore be defined as a basic restructuring of the educational system that impacts all tiers of the system, including local/districts, state/province, and individual schools. Specifically, the goal of educational reform is targeted at impacting all students and staff members within the school or system in order to accomplish shared educational goals. It is critical that system-wide change in education be adopted. The following highlights the importance of system-wide reform in education.

Significance of System-Wide Change in Education

When system-wide reform is implemented, it provides direction to states, districts, schools, and countries on how to create an improved educational paradigm (Gouëdard, 2020) by assisting in the resolution of issues facing the educational system (Ndaruhutse et al., 2019; Sullivan et al., 2015). System-wide change provides helpful direction for creating a shared vision for all parties involved in education. This helps to value and incorporate the opinions of all parties, leading to programs and products that are more likely to satisfy everyone's needs (Miller et al., 2006). Education reform at the system-wide level is intended from the outset to address present and future circumstances and issues, enabling students to become ready, able to adjust, and meet the demands of contemporary society (Gouëdard, 2020). Ndaruhutse et al. (2019) and Thompson et al. (2006) state that system-wide transformation capacitates any educational stakeholders, such as members of society, school leaders, students, the government, or educational institutions, to take ownership of a reform.

In order to break through long-standing barriers—both visible and invisible—and establish new connections and structures that have an impact on teacher learning and development, system-wide transformation can assist in resolving frequent misunderstandings that usually occur between school authority and the teachers. Changes at the system-wide level enable educational stakeholders to fully comprehend the relationships and causes that influence our work (Miller et al., 2006). System-wide transformation provides a framework for practitioners to look beyond the symptoms of a problem and assess or study the entire situation (Miller et al., 2006). It promotes cooperation and open communication in educational settings, which helps to prevent the negative effects of miscommunication or misunderstanding (Ndaruhutse et al., 2019; Miller et al., 2006).

Professional practitioners can aid in ensuring that changes in education are implemented successfully by facilitating debates and offering options when system-wide change is implemented (Meyer-Looze et al., 2019). Thus, it facilitates the efficient and painless

change of education (Connolly, 2017). Ndaruhutse et al. (2019) highlight that system-wide transformation addresses the requirements of specific societies, students, schools, families, groups, and the nation at large while also assisting in understanding the relationships between the different systems and stakeholders that comprise the system of education. Dueppen and Hughes (2018) remarked that the system-wide approach's effectiveness has made it the most widely accepted theory of educational reform. For any system-wide change to be successful, certain procedures have to be followed. The process will be presented in the next section.

Process of System-Wide Change in Education

The discrete occurrences that serve as pivotal moments in the development of educational reform can be used to characterize the process of system-wide reform (Jenlink et al., 1998). Educational change at the system-wide level is an ongoing effort. Duffy et al. (2006) and Reigeluth (1995) describe system-wide reform as a cyclical process that takes into account the effects of educational reform on all components of the entire system and their links to one another. Reigeluth and Karnopp (2020) assert that the system-wide process is highly variable and intricate, depending on the circumstances. Connolly (2017) contends that because it is simpler for people to concentrate on the individual components of a system than on the systems that link them, system-wide change is typically difficult to envision and rarely encouraged. Systems that are open have more variables at play, which raises the degree of complexity even further (Reigeluth & Karnopp, 2020). Reigeluth and Duffy (2019) confirm that piecemeal reform is not nearly as challenging as paradigm change, while Miller (2020) assert that system-wide change is large-scale and has a vast scope. Thus, Reigeluth and Karnopp (2020) also argue that system-wide, compared to piecemeal change implementation efforts, transformation is significantly more difficult to implement. System-wide transformation processes have been described as challenging endeavours in light of the previous. Despite the challenges, system-wide change is achievable. Advocates for systemic change through reform facilitation, research, periodicals, newspapers, workshops, seminars, and presentations connected to conferences—Adelman and Taylor (2007), Reigeluth and Duffy (2019), and Reigeluth and Karnopp (2020)—recommended four levels of facilitating a system-wide change reform. This paper is based on statewide system-wide change, among the four categories of system-wide reform processes, which are: district-wide, school-wide, ecological, and statewide.

To make the process visible at a glance, a summary of the entire system-wide reform process in diagram form is presented below.

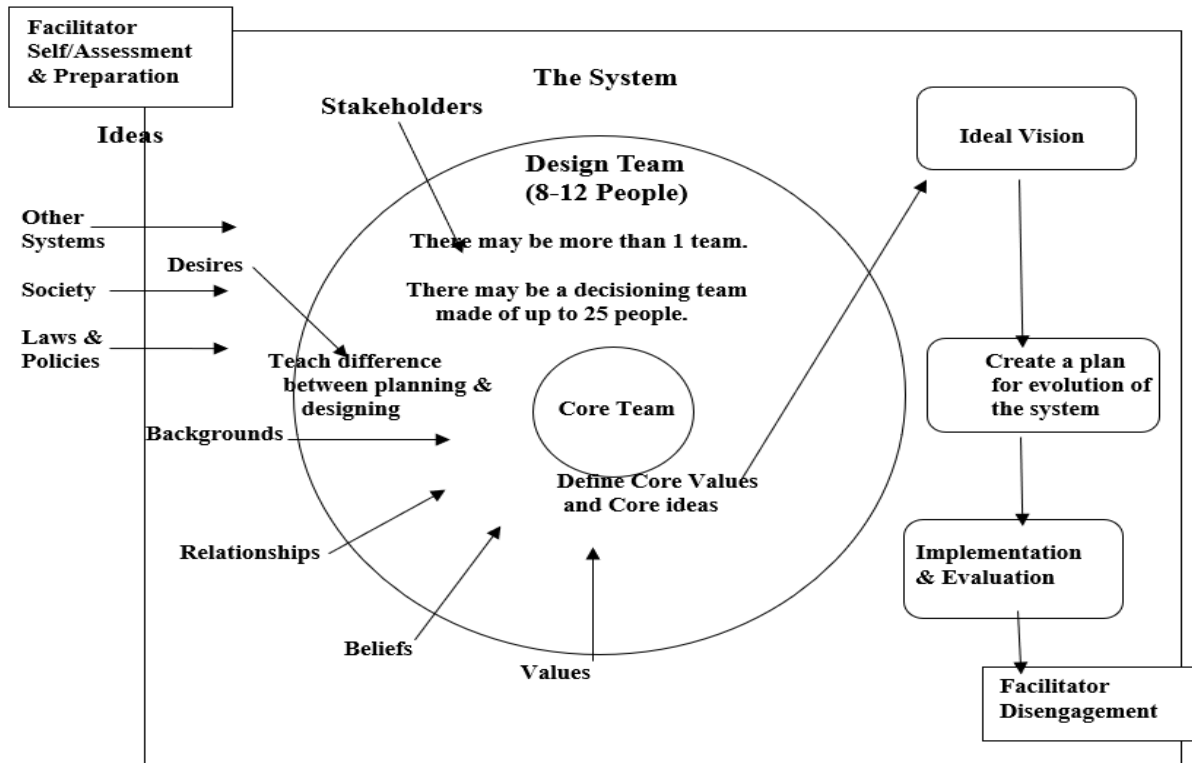


Figure 1: An overview of the whole process of system-wide change (Hawley, 1997. p 58).

The entire system-wide change process is depicted in Figure 1. We will go into more depth about each of the parts (phases) below.

Phase One: Assessing Facilitator and State's Readiness

The starting point of a sustainable system-wide reform process is to assess the readiness of the reform facilitator and the province/state/region. To determine the beginning point and capability for system-wide reform, the facilitator of system-wide change must make contact with and hold meetings with a variety of state stakeholder groups throughout this phase. Naicker and Mestry (2016) and Reigeluth (1995) confirm that system-wide leaders of the state's stakeholders and the system-wide change facilitator must first prepare the ground for change. A change facilitator is a person who assists an organisation in recognizing areas for improvement and cultivating group tactics to maximize the effectiveness of change initiatives, helps in identifying reform options, communicates clearly, resolves conflicts, helps in adapting to new reform, and provides the benefits and steps required to transition or transform (Reigeluth & Duffy, 2019). At this stage, it is critical that the facilitator and the state reach a specific level of preparedness in order for the system-wide reform to succeed. Meyer-Looze et al. (2019) and Reigeluth (2011) state that the readiness of the facilitators of the system-wide reform must be evaluated before they begin the facilitation process. The evaluation should be based on their capabilities in system-wide reform knowledge, experiences, skills, personal development, group processes, and their capacity to create a professional development activity that is relevant

to the area where the reform is to be implemented. To assess the state's preparedness and to foster confidence among all parties involved in the reform process, the system-wide change facilitator must recognize and comprehend the education system that is currently practiced in the area (Jenlink et al., 2010; Reigeluth & Duffy, 2019). Duffy et al. (2006) and Reigeluth (2011) advise that to decide whether to move forward with the reform plan, it is important for the facilitators to build rapport alongside the state's leadership stakeholders. At this stage of the reform, a memorandum of understanding could be used to help the facilitator and state come to an agreement on the terms and conditions and the roles and responsibilities of both parties (Adelman & Taylor, 2007). A written contract among the state and the reform facilitators ought to be signed, according to Cheng (2020) and Hawley (1997), to safeguard the facilitator's finances and guarantee the state's sincere commitment to the reform initiative. The facilitators of system-wide reform need to evaluate the state's preparedness by examining relevant documents and conducting interviews with educational stakeholders. It is necessary to assist the public in comprehending the nature and necessity of the proposed reform that will be implemented (Reigeluth, 2011). Cheng (2020) and Reigeluth (2011) remark that system-wide educational reform may not be sustained if the facilitators and state are not dedicated to collaborating with one another.

Phase Two: Prepare the Initial Core (Starter) Team for the Change

In the second phase of the system-wide change, the facilitator must assist the stakeholders in assembling a "starter team" in order to kick off the reform process. Immediately after that, the reform facilitators have signed a change agreement with the state (Sullivan et al., 2015). It is the role of the facilitators to collaborate with state officials to establish standards for choosing members of the core team who should be suitable for the transformation (Duffy et al., 2006). At this point of the reform process, it is advisable that a small group of stakeholders, ideally including the most influential members from each of the main stakeholder groups such as the school leaders, leaders of the teaching and non-teaching associations, as well as the representative of the parents in charge of putting school improvements into action, make up the starter team (Reigeluth, 2011; Jones, 2015). At this stage of the reform process, the facilitator is expected to assist the group in developing a suitable culture for system-wide reform. Developing the core team's abilities in system design and group processes, as well as their capacity to assess and analyse the current state of the country's educational affairs in relation to the intended change, are necessary for them to fulfill their duties with effectiveness (Watson et al., 2008). Sullivan et al. (2015) assert that the starter team is the main motivator and source of assistance for the system-wide change initiative. The starter team's main responsibility is to foster a climate of collaborative management, empower stakeholders, and establish consensus, confidence, and cooperation during the reform process (Sullivan et al., 2015; Thompson et al., 2006). The starter team members are also required to comprehend a paradigm shift in society, a system-wide transformation process in education, and system-wide thinking. They are also expected to get together on a regular basis (every two weeks) to go over reform theoretical frameworks and create a plan for the system-wide transformation (Darling-Hammond et al., 2020). In addition, the starter team is also expected to gain the ability to manage and catalyse change, with the goal of ensuring that the "big picture" is carried out in a way that is consistent with the local culture and true to the vision (Adelman & Taylor, 2007). Errida

and Lotfi (2021) further argue that the starter team members are responsible for creating connections between resources, assisting in the redesign of regular structural mechanisms, and solving problems. They don't just react to issues as they come up; they also take a proactive approach by creating plans to overcome known obstacles to change, such as unfavourable dynamics and reactions, common issues obstructing collaboration, and flaws in the system. Their aim is to accomplish all of this in a way that promotes communication with all relevant stakeholder groups, general preparedness and dedication to novel approaches, empowerment, and a sense of community.

The core team is tasked with building the knowledge and skills intended for the new educational system while taking into account diverse models of system design, system-wide theory, and practice (Darling-Hammond et al., 2020). It is imperative that the core team approach system design from a user-design perspective. During the design process, if the end-users are involved in every stage, it will lead to a user-design approach, which is an iterative design process that concentrates on meeting the demands of the users (Darling-Hammond et al., 2020). White (2015) remarked that all stakeholders must be informed about the importance and meaning of system design as set out by the core team. In order to create a system design in a school, it is vital to discard outmoded educational practices with the intention of replacing them with an idyllic one. This entails surpassing and letting go of the educational system that is present, visualizing the new educational system that needs to be built, designing the system so that when it is put into practice, it transforms the current state into the intended future state, putting the model or models of the expected system on display, and planning the new educational system that will be implemented (Jones, 2015).

In the second phase of system-wide change, it is the responsibility of facilitators to assist the core team in identifying the nation's current and possibly conflicting change initiatives as well as the current locations of the nation's change-related resources (Hobbs & Midgley, 2020). It is anticipated that facilitators and core team members will speak with individuals who hold divergent opinions about the reform in order to persuade and make them aware of the necessity of putting such opinions on hold and supporting the new system-wide change process effort (Darling-Hammond et al., 2020). Combining system-wide reform initiatives alongside other ongoing changes in the educational system is crucial to fostering effectiveness and sustainability after targets are established and reform design gets underway (Sullivan et al., 2015). Lastly, during this phase, it is the duty of the facilitators to support the core team in assessing the degree of the broader stakeholders' preparedness for change, the reasons behind their openness or closedness to it, the factors they believe led to the accomplishment or ineffectiveness of previous reform initiatives, and their present beliefs and mindset regarding educational change (Hobbs & Midgley, 2020).

Phase Three: Prepare the Expanded Team

This stage involves getting the expanded reform team ready for the reform after preparing the original core (starting) team. Once the core team is established, Duffy et al. (2006) and Reigeluth (2011) suggest that the facilitator should help them grow into several change teams with representatives from each stakeholder group (roughly 20–25 members) as well as a small stakeholder design support team (roughly 7–10 people) that will help the larger team. At this point, Thompson et al. (2006) state that the new teams are expected to rely on the core team for support and vital vision and to share the knowledge, expertise, and

change-oriented culture of the core team. According to Jenlink et al. (1998), the two to five decision-making team members must be part of the design support team. The five individuals serve as the core of a larger design support team comprising about ten members, who are assigned an ad hoc and supportive role in the system-wide reform effort. The group that makes decisions creates a team-building activity that is akin to what it just experienced. In the end, the design support team creates its own operating system, which must be approved by the decision-making group (Musaigwa, 2023). As a foot soldier, the design support team is responsible to act as a source of inspiration as well as the motivation that are required for the duration of the change process. The design support team also offer a powerful voice in the change initiative and act as a liaison between the community and the enlarged team. Along with stakeholder feedback regarding the changes and the change process, the leadership team is tasked with making choices and providing the necessary support for the reform effort (Musaigwa, 2023). Reigeluth (2011) states that the support team needs to be trained in systems practice, models, theory, and design in order for them to be able to use different approaches to the reform effort, such as “user-design” against “expert designer”, “interactive” as opposed to “non-interactive”, “designing” as opposed to “planning”, and “outside-in” versus “inside-out” tactics to reform.

Phase Four: Design a new System

A couple of common ideas of an ideal system of education are established during this crucial system design phase, which helps the participants go past their preconceived notions about schools and educational reform (Sengeh & Winthrop, 2022). Duffy et al. (2006) highlight that facilitators are shadowed with the responsibility of helping the design team members recognize and metaphorically leap out of their own ideas about education. At this point, cultivating knowledge of various educational techniques and the societal developments that orchestrated the need for system-wide reform falls under the purview of the design team, the decision-making team, and the facilitators (Meyer-Looze et al., 2019). Jones (2015) asserts that a change in perspective for those involved in the educational system is therefore necessary, as the process of systemic transformation may be impeded by people's attitudes toward education. Joseph and Reigeluth (2010) state that our society is entrenched in an educational system that is presently outdated. Therefore, altering an educational system necessitates altering the perspectives of those involved in education (Jones, 2015). Helping all educational stakeholders shift their perspectives and mental models is a significant stage of a system-wide reform procedure (Joseph & Reigeluth, 2010). Although it may seem impossible to influence someone else's perspective, Sengeh, and Winthrop (2022) contend that it is a necessary step in the system-wide reform process. Jones (2015) remark that the members of the design support team are expected to engage with members of the larger stakeholder group to assess and contribute to the development of new presumptions and attitudes about the outdated educational system. Stakeholders are expected to participate in the problem definition process, which entails collecting and analysing data from various sources, including student records, policy records, observations made in the classroom, surveys, and interaction with stakeholders, in order to identify the specific discrepancies being targeted and to define the objectives for system-wide change (Sullivan et al., 2015). Hobbs and Midgley (2020) concur that all stakeholders must debate, examine, and take into account the data that has been collected. While Sengeh and Winthrop (2022) believe that stakeholders should work toward an ideal system as

opposed to trying to rework the system they are currently a part of, Indeed (2023) contend that based on the requirements and ideals of society, stakeholders should formulate and agree upon the new educational system's objective.

To create an ideal vision when there are different visions amongst the stakeholders, the details must be worked out for each of the visions in order to determine which of the visions meet with stakeholder approval. Jenlink et al. (1998) assert that an ideal vision needs to be backed by leadership support and the imagined and planned governing systems. Menchaca et al. (2003) indicate that managerial and administrative assistance are crucial components of the system-wide reform effort. Darling-Hammond et al. (2020) state that a newly formulated system needs leadership support that could offer procedures for authority transfer, financial modalities, and effective policies that could increase the success of the new system. The system of administration is expected to be designed in a way that will best support the new system. Hobbs and Midgley (2020) note that infrastructure and an action plan for implementing educational reform should be set out as part of the administrative system. The administration has to realize that providing financial, technological, and other resources for system-wide reform is an ongoing effort (Ender et al., 2007; Indeed, 2023). Through consensus-building, the facilitator creates a vision of the ideal system of education with the help of the design support team as well as every member of the design team. Menchaca et al. (2003) and Reigeluth (2010) opine that stakeholders are required to assume responsibility for and create a shared vision of the new educational system, and all and sundry should become passionate about and committed to this new vision. Darling-Hammond et al. (2020) suggest that the design team's basic ideals and concepts must serve as the foundation for the ideal vision.

Once the ideal vision has been developed, all stakeholders should work together to develop an assessment system for the reform process (Sullivan et al., 2015). It is anticipated that this system will incorporate mechanisms for positive feedback, self-renewal, introspection, and an awareness of the importance of critical analysis. To make its vision of a new educational system a reality, the statewide design support team must collaborate with the members of the design team to identify and create a set of functions as well as the parts needed to carry out the various tasks of the subsystems (Adelman & Taylor, 2007). Reigeluth (1995) contends that to achieve the objective of the new educational system, a cohesive system of interrelated functions needs to be created and arranged so that they complement one another and work in unison. According to Adelman and Taylor (2007), negotiating an agreement with the stakeholders who are responsible for making decisions and implementing them, as well as securing a significant policy commitment from all involved stakeholders, are essential components of the system-wide change process. To evaluate whether the vision truly reflects the requirements of society and to identify the utmost necessary skills to reach the reform's vision, reflection by all stakeholders should occur at various moments during the discrete events of an educational reform process (Darling-Hammond et al., 2020).

Phase Five: Implement and Evolve the New System

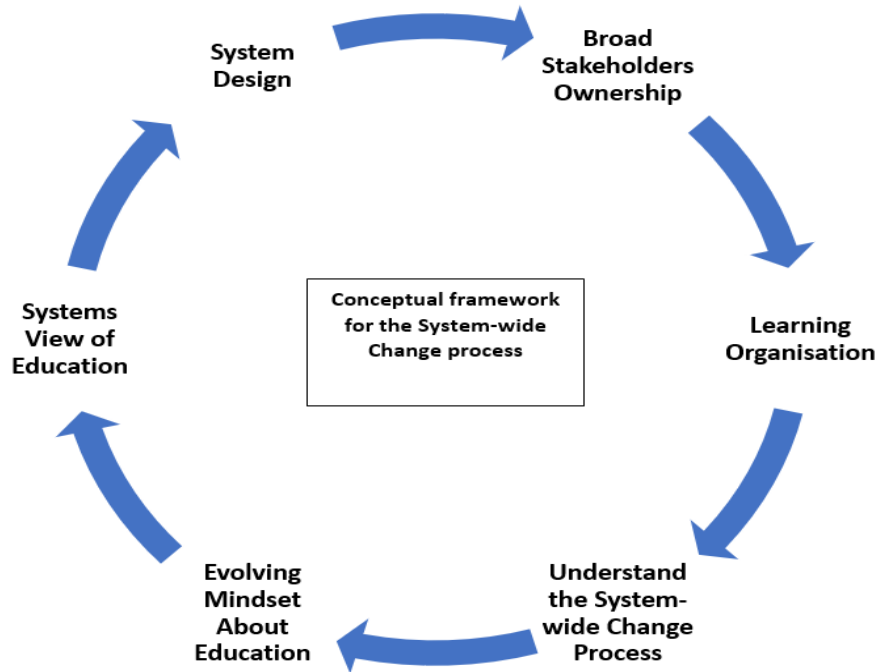
The stakeholders must build an implementation procedure to gradually improve the current system to bring it closer to the ideal as soon as they approve the ideal designs that have been generated during the designing phase. Indeed, (2023) and Miller (2020) assert that it is necessary to adhere to the implementation protocol as it was established during the

design phase. Harrison et al. (2021) emphasize that having a brilliant idea or solution alone is insufficient; the most crucial effort is understanding how to put these ideas into practice. Short-term provisions for ideal revision should be permitted, since the ideal may evolve as the reform process approaches it. As a result, Dlamini and Reddy (2018) contend that planning is necessary in order to move the current system closer to the ideal and incorporate evaluation into the reform procedures. Many of the aspects of the perfect system are not likely to be achieved right away. According to Miller (2020), the design team as well as the design support team have an obligation to understand how to gradually move closer to the ideal while minimizing the discrepancies between the system's planned and existing components. All parties involved should develop and embrace this. Reigeluth (1995) says that when selecting an approach, a relevant stakeholders' approach design ought to be used instead of a "buy it off the shelf" method.

Duffy et al. (2006) state that upon the approval and execution of a new design, formative assessment must be conducted to be able to constantly improve the newly developed education design. Hawley (1997) suggest that the new system must go through several formative assessments during the initial years of its implementation. After five years, the stakeholders may subject the system to a summative assessment. A periodic evaluation utilizing the evaluation system created during system development is necessary as the new system develops and provides revision support mechanisms (Adelman & Taylor, 2007). Formative evaluations are stage-by-stage assessments carried out during the reform process, while summative evaluations are assessments carried out at the end of the reform process that are aimed at determining how successful a reform is. This can be applied to assess the transformation process's outcomes. As it establishes the framework for the system-wide reform process, Harrison et al. (2021) agree that reflection and feedback are necessary at every level of the process. According to Ender et al. (2007), regular assessments of the new system will assist in determining its advantages and disadvantages or challenges so that any required modifications or fixes can be made.

Conceptual framework for a sustainable system-wide change process

In this paper, the system-wide reform process proposed by Joseph and Reigeluth (2010) serves as the foundation for the conceptual framework that could guide educational reform efforts. Literature on systems theory, in particular soft systems theory and critical systems theory, serves as the foundation for the conceptual framework for systemic transformation. This system-wide change process framework gives stakeholders the groundwork they need to attain efficient and sustained educational reform. This paradigm can be used as a lens through which to examine initiatives for educational reform. The figure below illustrates the key components, which include broad stakeholder ownership, the creation of a learning organisation, comprehension of the process of system-wide change, changing educational mindsets, a systems view of education, and systems design.



Joseph and Reigeluth (2010) provided the conceptual framework for the system-wide change process in Figure 2.

The process's sequence is indicated by the arrows. Building wide stakeholder ownership is the first step (Joseph & Reigeluth, 2010).

Broad Stakeholder Ownership

The conceptual framework that guides the system-wide reform process relies heavily on broad stakeholder ownership, which is the cornerstone around which all other elements are constructed. Without it, the framework's meaning and intent would be lost (Joseph & Reigeluth, 2010). A state community's stakeholders include educators, parents, clergy, government employees, and local leaders. Since education is crucial for the growth of the entire community, broad stakeholder ownership also includes all members of the community, including business executives, local government representatives, and regular citizens (Joseph & Reigeluth, 2010; Stouten et al., 2018). To better the area and society at large, every member of the community should make an effort to guarantee that the local learners obtain the greatest education possible (Errida & Lotfi, 2021). According to Ender et al. (2007), everyone participating in educational reform must be prepared to commit to the change process and stay with it over time. Moreover, Banathy (1996, p.161) notes, as quoted in Joseph and Reigeluth (2010, p.101):

When it comes to the design of social and societal systems of all kinds, it is the users, the people in the system, who are the experts. Nobody has the right to design societal systems for someone else. It is unethical to design social systems for someone else. Design cannot be legislated; it should not be bought from an expert, and it should not be copied from the designs of others. If the privilege of and responsibility for design is 'given away', others will take charge of designing our lives and our systems. They will shape our future.

Errida and Lotfi (2021) caution against selling educational reform to people in an attempt to hasten agreement and execution of the reform. Selling educational reform to people is not a successful model that is sustainable.

Joseph and Reigeluth (2010) contend that for system-wide change to take place, stakeholders from various backgrounds must work together. This will support the process of change by fostering a broad continuum of varied life experiences and viewpoints (Stouten et al., 2018). All stakeholders will be more engaged and take ownership of the change process if they are allowed to have "equal voice" in the process (especially the voices of those who have historically been marginalized) and participate in decision-making (Joseph & Reigeluth, 2010). For the change process to be effective, active participation from all stakeholders at all levels is essential (Ender et al., 2007). All educational stakeholders should be involved from the beginning of the system-wide change process and given a sense of shared ownership. This will cause them to undergo a shift in mindset to see the change as a collective rather than merely individual effort (Stouten et al., 2018).

Creation of a Learning Organisation

Another important idea that aids any organisation in implementing change successfully is the concept of a learning organisation. Bratianu (2015) and Joseph and Reigeluth (2010) describe a learning organisation as a metaphor for the perfect organisation or as a concept at the system level with specific attributes. According to Bratianu (2015), a learning organisation is one that continuously increases its capacity to shape its future. An organisation that employs organisational learning to accomplish its objectives aspires to become a learning community or organisation, since organisational learning is centered on fostering mutual respect, integrity, and trust via communication, sharing, and handling the inevitably arisen conflict (Bratianu, 2015; Joseph & Reigeluth, 2010). Joseph and Reigeluth (2010) report that research conducted by Darling-Hammond (1996), DuFour and Eaker (1998), Fullan (1993, 2001), and Senge (1990) shows that becoming a learning organisation is imperative to understanding the systems change process. Senge (1990) enumerates seven attitudes that can prevent an organisation from developing into a community or learning organisation:

I am in my position: when individuals in an organisation solely think about themselves, they lack accountability for the outcomes that arise from the interactions of all positions.

The adversary exists: When something goes wrong, we all have a tendency to point the finger at someone or something external to ourselves.

The false impression of being in control: reactivity masquerading as proactiveness occurs much too frequently. Regardless of the term, we are responding in education if we are combating the "enemy out there" with aggression. Real proactivity arises from realizing our own role in our own issues. It is a byproduct of our mentality rather than our feelings.

The obsession with events: If people's thinking is centered around fleeting events, generative learning cannot be maintained in an organisation. The best we can ever do, if we concentrate on events, is anticipate an event before it occurs so that we may respond as best we can.

The cooked frog tale teaches us that in order to perceive slow, incremental processes, we must slow down our fast-paced lifestyle and pay attention to both the dramatic and subtle details.

The illusion that experience may teach us something is the fundamental learning conundrum that faces organisations: although we can learn the most from experience, many of the most significant decisions we make never directly affect us.

The myth of the management team: Too often, businesses and teams spend their time squabbling over territory, avoiding situations that could reflect poorly on them individually, and acting as though everyone is in agreement with the group's overall plan in order to preserve the impression of a cohesive unit.

One of the most important components of an educational reform process is the creation of a learning organisation, which also serves as the front of the framework that unites all the other components (Bratianu, 2015; Joseph & Reigeluth, 2010).

Understanding the Process of System-wide Change

All stakeholders participating in system-wide change must comprehend the nature of the process and its requirements before any changes can be made to the system as a whole (Lawton & Pratt, 2022). Joseph and Reigeluth (2010) assert that dialogue and communication are essential fragments of the systemic change process because they serve as forums for bringing various stakeholders together to help them understand and appreciate their diverse opinions, values, and beliefs. Miller (2020) asserts that there are four key components to comprehending the process of system-wide change: any system-wide change process should aim to create an educational system where all teachers are successful in assisting students in succeeding; altering an educational system necessitates altering the perspectives of others; small process teams (five to six stakeholders) must be used to carry out the steps of system-wide process change; and effective dialogue and communication are crucial. It is imperative that stakeholders possess a comprehensive comprehension of the change process and base their judgments on dependable data and learning organisations. Establishing mechanisms where all stakeholders are successful in promoting student success is the aim of the change process (Joseph & Reigeluth, 2010; Meyer-Looze et al., 2019). Following the adoption of these decisions regarding the system-wide change process, the stakeholders are expected to accept and share ideas with those engaged in the change process (White, 2015).

Evolving Mindsets About Education

For the system-wide change process to be successful, the stakeholders' perspectives must be changed (Joseph & Reigeluth, 2010). Mindset change could be described as the "mental model" people adopt in solving problems or addressing issues (confronting challenges) (Gouëdard et al., 2020). At some point in our lives, everyone has gone to school. As a result, people develop "ingrained ideas" about what schools are like and how best to support education (Joseph & Reigeluth, 2010). Senge (2000) describes embedded ideas as presumptions, generalisations, or even visuals or pictures that shape our perception of the world and our behaviour. The stakeholders' mindset might impede the process of education system-wide change; therefore, the necessary paradigm shift in education cannot occur until the stakeholders' mindset on education is transformed (Senge, 2000). Duffy (2007) states that the stakeholders need to challenge long-held notions, reject long-held convictions, and modify long-held attitudes in order to design a new educational system. When influencing an individual's way of thinking appears unachievable, it is crucial in the process of system-wide transformation (Joseph & Reigeluth, 2010). Gouëdard et al. (2020)

contend that in order to effect system-wide change, it is crucial to assist the stakeholders in evolving their perspectives and attitudes regarding education. Fullan (2007) agrees that stakeholders involved in education, whether they are local, state, or federal, should avoid viewing schools as "my" or "personal" and instead consider them as "our" or "belonging to all."

A Systems View of Education

Educational stakeholders must create a system-wide perspective on educational systems and a comprehension of system activity or dynamics to conduct meaningful system-wide initiatives for educational reform (Joseph & Reigeluth, 2010; Mchunu, 2015). According to Banathy (1992), the systems view aids in our comprehension of the true nature of education, which is that it is a complex, open, and dynamic human activity system that functions in a variety of constantly changing environments and interacts with various societal systems. Studying many systems and their inner workings and internalizing the system's common notions so they may be applied to everyday situations are necessary to develop a systems approach to education reform (Darling-Hammond et al., 2020).

To make it easier to understand and analyse a variety of systems, including educational systems, models have been developed (Mchunu, 2015). The systems-environment model assists in identifying the connections the school has with the community, both past and present; the process model studies how a system behaves throughout time, while the functions/structure model looks at the educational system as it exists at any time (Banathy, 1992; Mchunu, 2015). Metaphors can help others think more creatively, so using them is another technique to help stakeholders understand education systems (Joseph & Reigeluth, 2010). Systems models and organisational metaphors can assist educational stakeholders in developing a systemic perspective of education, thereby aiding the process of implementing educational changes (Whang, 2021). It is best to think of the dynamics of the educational system as a dynamic framework. A single structure cannot function on its own. Therefore, stakeholders should acknowledge the interdependencies within the educational system upon system-wide reform (Joseph & Reigeluth, 2010). When educational stakeholders are unaware of the relationships that exist within educational systems, the lack of a systems view might have unanticipated implications. It is possible that adopting a systems perspective will assist individuals in changing the way they think about education (Whang, 2021).

Systems Design

System design must serve as the foundation for any system-wide change approach (White, 2015). Sengeh and Winthrop (2022) affirm that designing systems for any human system is a process of constructing the future. Individuals participate because they have an idea of what their system ought to be. They are the type of people who "think future, act now." Disregarding outmoded systems of education and replacing them with the ideal design is a process of creating a system design (Watson et al., 2008). This process comprises putting the current system aside, looking beyond it, imagining the future system, designing the system that will be able to transform the current state of education into the desired state once it is implemented, presenting the designed system's prototype or prototypes, and organizing its implementation (Joseph & Reigeluth, 2010). However, Banathy (1992) advise stakeholders to start the process of "Getting Ready for Design" before actually

starting a systems design process. This involves understanding systems design, developing capability and competence in design, building organisational capacity for design, generating community support for the design effort, and creating a plan for the design inquiry.

Banathy (1992) advocates for stakeholder involvement in system design, noting that when users, not outside specialists, are in charge of the design process, it is more likely to be effective, feasible, and productive, and implementation promises are more legally binding. Watson et al. (2008) argue that when selecting an approach, a relevant stakeholders' approach design should be used instead of an expert method that can be purchased off the shelf. Stakeholders are given the chance to advance from the current, antiquated educational system to a better educational system via the systems design process (Joseph & Reigeluth, 2010). For any system-wide reform process to be successful, it should strive to envision and create an ideal educational system using a systems design approach (Sengeh & Winthrop, 2022). The conceptual framework known as systems design enables stakeholders to develop new methods for planning, carrying it out, and evaluating it (White, 2015).

Conclusion

This paper emphasises that sustainable system-wide change demonstrates how stakeholders must take charge of the design and execution of the educational system, offering a solution to the issues it faces and assisting in elevating and valuing the opinions of all stakeholders. Sustainable educational system-wide change is intended from its conception to address educational circumstances and difficulties that are both present and future, assisting all stakeholders in becoming ready, able to adapt, and meeting the educational demands of contemporary society. Collaboration is encouraged, and it facilitates comprehension of the connections between the several systems and stakeholders that comprise the educational system as well as the relationship between internal and external factors that influence educational change.

Furthermore, the paper elucidates that successful change within an educational context requires adherence to an ideal process, encompassing several key steps: evaluating the readiness of all involved parties, negotiating agreements, assembling an initial core team, expanding this team, crafting a new system, and executing and refining it over time. It emphasizes that the effectiveness of educational change hinges on a conceptual framework serving as a guide and checklist for educational system-wide transformation. This framework encompasses principles such as widespread stakeholder engagement, fostering learning organisations, comprehending the system-wide change process, shifting mindsets about education, adopting a systemic perspective on education, and designing systems accordingly. The conceptual framework outlined herein provides a roadmap for the introduction and implementation of systemic changes, equipping stakeholders with the knowledge necessary to navigate the complexities of an effective and efficient educational reform. Furthermore, this paper contributes to a holistic understanding among educational stakeholders regarding the creation and sustainability of system-wide change processes. It sheds light on the critical factors that contribute to the success of such transformations and elucidates the essential support structures and activities required for their effective implementation.

If the aforementioned process and conceptual framework are rigorously adhered to during educational reform by all the respective education reform players, it will result in an educational outcome that is not only effective and efficient but also relevant and sustainable. In conclusion, by synthesizing these key elements, this paper presents a comprehensive framework tailored for researchers delving into the dynamics of sustainable system-wide change processes. It also has the potential to empower educational stakeholders with knowledge and tools that could serve as a valuable guide for navigating the complexities of initiating and implementing impactful and sustainable system-wide transformations within the education sector.

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