

## **PRESENTING A FRAMEWORK FOR FORESIGHT IN EDUCATION**

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### **Abstract**

Now, education systems, especially in developing countries, do not respond appropriately through educational programs to challenge future issues and problems. This gap stems from the education practitioners' lack of awareness of the philosophical approaches to foresight and futures studies. While any deficiencies in education programs caused by a lack of approach to the future will have a lasting negative effect on the students' and learners' minds about the future and the society in which they live. The present study aims to present a framework for forecasting in education. This framework provides policy makers, strategic planners, and education stakeholders with the opportunity to help them map out possible and preferred futures for education. This framework shows that the process of Foresight in education is evident. The process includes Pre-foresight phase that preparatory activities are carried out for performing the original foresight. The main foresight phase: At this stage, the methods of operationalizing foresight process are carried out. Post-foresight Phase: At this stage, activities related to the dissemination of results among future policymakers will occur in a variety of time frameworks. Three important people's capabilities for Foresight include: conceptual understanding, calculation ability, forecasting spirit and methodology. Also, the Essential Components in order to study the future in the field of education are a) philosophy (based on emphasizing the needs of society and sustainable development), b) goals (include measurement of the degree of adaptation of scheduled programs and their implementation in the future; accountability of academic units on how to use human resources, material, financial and information resources and so), c) theoretical foundations (consist of theory of the meta-system transformation, tri-component model of attitudes of the future knowledge system, model of knowledge, information and knowledge-information, d) executive processes (involves the following steps: Establishment of a bureau for futures studies in the organization; Establishment of the human resources forum on futures studies in the organization; Design of the futures studies workshop; Design and future modelling research with regard to the identified components; Analysis and completion of the model of futures studies and presentation of the report ; Evaluation, and finally reengineering systems (it should be implemented with regard to developments in education at the national and international levels).

**Keywords:** Education, Futures studies, Foresight, Conceptual Understanding.

### **1. INTRODUCTION**

the students and learners must be prepared for the future. As Weimer (2012) notes it is terribly important that in explicit and concerted ways we make students aware of themselves as learners. We must regularly ask, not only 'What are you learning?' but 'How are you learning?' We must confront them with the effectiveness (or ineffectiveness) of their approaches. We must offer alternatives and then challenge students to test the efficacy of those approaches (p. 1).

For education in a twentieth century learning and knowledge, these are new approaches. Adopting twenty-first century pedagogy requires teachers to rethink their reasoning about what they teach and why, and to rethink who they are as teachers. It requires them to 'resituate themselves professionally, not as a traditional

teacher, but as a highly skilled advanced learner' (Saavedra and Opfer 2012, p. 6). The roles of educational systems in the future and their capacity to radically transform themselves and others remain uncertain. All countries will face consequences if today's learners are not adequately prepared to collaborate and resolve the world's economic, environmental, health, social and political challenges. Every nation can contribute to a global pool of expertise on how best to implement a twenty-first century education system (Trilling and Fadel 2009). The main question is:

What adaptations can be expected in education in the future? Planning for the adaptations is done through futures studies (Scott, 2015).

## 2. FUTURES STUDIES

Foresight is capital. Whoever welcomes the future is the most visible, and whoever goes back to the future is finally wandering. Success is achieved via a far-sighted thrall. (Imam Ali, quoted in *Ghurur al-Hikam wa Durar al-Kalim*). Futures studies are meant to anticipate and visualize possible and not definite future using resource analysis, current situation and planning requirements for readiness to face them. Individuals who investigate the future, also called foresighters, are those who learn how to study the present situation using values and goals, and identify possible future situations by analyzing the information (2011, Tolon). Looking to the future has attracted managers' attention as a necessity. Thus considering technological innovations, cultural changes, the supply of new products, better services, hard rivals, changes in social values, changes in government priorities, unsustainable economic conditions and unpredictable events, the future prediction has become a complex activity. Managers need to identify the opportunities and threats ahead of them to anticipate future changes that they are facing (David 2009). Futures studies have two basic approaches:

1. Forecasting
2. Foresight

In an effort to identify signals and even decode them, Forecasting will seek to discover future affairs and, in order to prevent future uncertainties, uses a futuristic approach that can be relatively passive. But foresight is about writing the future. It is very creative and actively looking to build a desirable future, not just to present comments about it discover it. It means that among the possible probable, and preferred futures, it tries to create a better one. In fact, the forecasting rises from the confrontation between the two philosophical foundations of "visionary" and "exploratory", but a foresight appears from the confrontation between two philosophical "visionary" and "prescriptive or normative" foundations.

According to the Keshavarz Tork and Nikuyeh (2016), activities in the field of foresight are divided into three phases, and part of the work is done in each of these steps. These three phase are:

1. Pre-foresight phase: At this stage, preparatory activities are carried out for performing the original foresight. Those activities are setting goals, developing foresight concepts among contributors, and providing resources and materials.
2. The main foresight phase: At this stage, the methods of operationalizing foresight process are carried out. Questionnaires were submitted to participants and experts, and answers are evaluated and analyzed.
3. Post-foresight Phase: At this stage, activities related to the dissemination of results among future policymakers will occur in a variety of time frameworks. Using foresight techniques enables education managers to identify the status of possible and preferred futures in the educational system and the differences between them and to assess how these future developments can evolve.

Several factors affecting the success of forwarding education in education are as follows: strong solidarity between the public, private, and academic sectors; the involvement of different shareholders; the relationship with the current policy agenda; the development of new methodologies, creativity and lateral thinking; active public activity, and consideration of previous experiences (Habegger, 2010: 5). Moreover, foresight, based on what Johnson (2012) argued, has four kinds of effects on education:

(awareness raising, informing, enabling and influencing) form a Foresight impact schema (Johnston 2012 به نقل از Sokolova 2013).

"Two particular characteristic concerning for both foresight and futures studies are (Kuosa,2011, cited of Wikipedia):

- Concern for the longer-term futures that are usually at least 10 years away (though there are some exceptions to this in foresight).
- Concern for the alternative futures. It is helpful to examine alternative paths of development, not just what is currently believed to be most likely or business as usual. Often futures work needs to construct multiple scenarios. These may be an interim step during the process of creating what may be known as positive visions, success scenarios and inspirational futures. Sometimes, alternative scenarios will be a major part of the output of futures work”.

Amanatidou and Guy (2008) believe: Foresight processes should also be designed in such a way as to ensure inclusiveness, flexibility and the sustainability of the networks created. The inputs and outputs should exploit the compatibility and complementarity of the available areas of expertise. The foresight objectives should reflect goal alignment and the mutual benefits and interests of the interested actors.

Current approaches to Futures Studies “aim to provide a systematic framework to draw out, challenge and refine, often tacit, knowledge about the future” (Berkhout, 2002) For more traditional organizations hoping to foster a culture of foresight, this requires a shift towards creating a learning organization ( GCPSE,2014).

### **3. THE NECESSITY OF FORESIGHT IN EDUCATION**

If education has a duty or justification, this task or justification is the preparation of youth for the future (Alvin Toffler, 1974). In the current context of education systems, to challenge future issues and issues, it is necessary to respond appropriately through the provision of educational programs, while this has not happened at least in developed countries. This absence is because of the lack of awareness of education professionals about the philosophical approaches and futuristic studies of philosophy. Any deficiencies in educational programs resulting from the absence of any approach to the future will have a negative effect on learners’ minds regarding the future and the society in which they live.

Since futures studies provide a systematic opportunity for to look at the future and examine the role of effective factors in the creation of the future, it provides possibilities for creating a favorable lookout for decision-makers and policymakers of the education institution to identify and build capacity through identification and creation of new capacities and capabilities and provide possibilities for utilizing future opportunities. Furthermore, entering the field of futures studies in education has the following consequences:

- Preparation of the education institution and its stakeholders towards the future;
- An overview of emerging futures and their impact in the field of education;
- Early understanding of alarms and warnings in the education system;
- Superiority and overtaking of the education organization in the development of the country compared to other institutions;
- Compliance with changes in the external environment (national and international) of the education institution; and
- New ideas about planning and investing in education.

The complexity of the present and future world means that learners must be equipped to navigate unexpected challenges ahead. Key drivers and challenges are redefining the competencies and skills that learners need to develop. These forces represent significant disruptive shifts that are likely to reshape the future landscape of education and work, and produce changes in the way people learn (Scott,2015).

Educators have repeatedly argued that present approaches to teaching and structuring learning environments are inadequate to addressing and supporting twenty-first century learning needs and schools must evolve to ensure the information and skills needs of students. (Scott,2015). in the 21 century, the key focus of learning is adaptation to keep pace with demand and expectations (Punie, 2007).

### **4. FUTURES STUDIES ABILITIES IN EDUCATIONAL LEADERS, TEACHERS AND STUDENTS**

Via their research, Parsa et al. (2011) concluded that futures studies capabilities in individuals is along with four components each of which is in some way related to the intrinsic or acquired features of individuals,

including: a) conceptual understanding; B) calculation ability; c) forecasting spirit; d) methodology.

Understanding concepts such as landscape, horizons, and strategies are done via bridging from past to present and future. Moving past and coming to the future using scientifically and fairly accurate calculations, along with taking into account the magnitude of a possible error in predictions, will well occur. But the forecasting spirit increases the interest in this conception and calculation. Bowden (1985) believes that relying on the forecasting of decisions made today will lead to a better tomorrow. Therefore, in forecasting concept, the prediction of the changes occurring in the future is hidden, and the ability to guess the possible changes occurring in personal and social life are based on intrinsic and acquired talents. Individuals who have a forecasting spirit look sharp, with a deep view of their surroundings. Through their familiarization with forecasting methods, they will realize their dreams more easily and will achieve the desired future they have traced.

Other researchers investigated futures studies capabilities. For example, Haghghi Molaei et al. (2017) explained the capabilities of futures studies based on leadership style and personality traits in academic administrators, and concluded that the components of personality traits and leadership style can explain the capabilities of futures studies in managers. In addition, the results of their analysis indicated that in addition to direct prediction personality traits indirectly and through the variable of leadership style can predict the managers' forecasting abilities. Mazroghi et al. (2013) examined the relationship between students' quality of learning experiences and their ability of futures studies, and concluded that the dimensions of the quality of learning experiences, the dimensions of learning flexibility, content and formal and informal and teacher-student relationships had positive and significant correlation with students' futures studies abilities.

Training for familiarization with futures studies methods strengthen other futures studies opportunities for teachers and students such as:

- Creating a landscape and scenario for your future by linking educational content with real-life situations;
- Monitoring the environment through searching for their desired data and understanding the interest of others in the same subjects and information; and
- making students and teachers participate and being engaged in drawing up the future.

Niaz Azari (2012) believes that the following components should be considered in order to study the future in the field of education: these components include: philosophy, goals, theoretical foundations, executive processes, evaluation and reengineering systems that are as follows:

A: The philosophy of the futures studies model is based on emphasizing the needs of society and sustainable development, relying on popular participation, preparing and training for the future, discovering past to present trends, believing the value load obtained from the futures studies process in skills training.

B. The main objectives of futures studies models: These objectives include measurement of the degree of adaptation of scheduled programs and their implementation in the future; accountability of academic units on how to use human resources, material, financial and information resources; the use of existing experiences and capacities with a collaborative approach to self-reliance; preparation and adjustment of the future perspectives, regulation of the issues and certainty of dealing with future events and making costly decisions against expenditures, prioritization issues and long-term planning against the future events, minimization of the lack of support for the strategic plan, and elimination of their deficiencies, and improvement of the process of finding a clear vision of the opportunities and challenges of the future and the prevention of some issues.

C: Theoretical foundations of the model: consist of 1 - theory of the meta-system transformation, 2- tri-component model of attitudes of the future knowledge system 3-model of knowledge, information and knowledge-information, 4-dynamic model of knowledge-information, 5-model of the theory of change (ToC) which is a futures studies instrument.

D: Implementing the model involves the following steps: 1. Establishment of a bureau for futures studies in the organization; 2. Establishment of the human resources forum on futures studies in the organization; 3. Design of the futures studies workshop; 4. Design and future modelling research with regard to the identified components. 5. Analysis and completion of the model of futures studies and presentation of the report.

E: Model evaluation and reengineering: In evaluating the model, all future research reports and publication of the results of futures studies should be developed. Publication and submission require the information technology management system to collect feedbacks and accomplish proposed reforms. After evaluating and through reengineering, it should be implemented with regard to developments in education at the national and international levels.

## 5. CONCLUSION

For providing foresight in education, it is advisable to have a scientific and rational framework to enable all shareholders to contribute to the development of a better and more developed future of education. According to the theoretical framework, the following framework is presented for futures studies and in education. As it is clear in this framework, an illustration of the overview of education in the future, the preparation for a possible future, and the early perception of the alarm are the necessities of foresight in education. Foresight needs forecasting, but foresight is a passive activity that can play a role in predicting the future of the system via utilizing the potentials of futures studies of all education shareholders. To take foresight (pre-foresight, foresight, and post-foresight) phases, it is necessary to draw a foresight model (this model is shown in Figure 1). By mapping this model, futures studies will have important implications in the education system. Some researchers have suggested analyzing the internal criteria (such as criteria for actors, processes, goals, inputs, outputs) as well as environmental and external factors for a qualitative assessment of the effects of foresight.

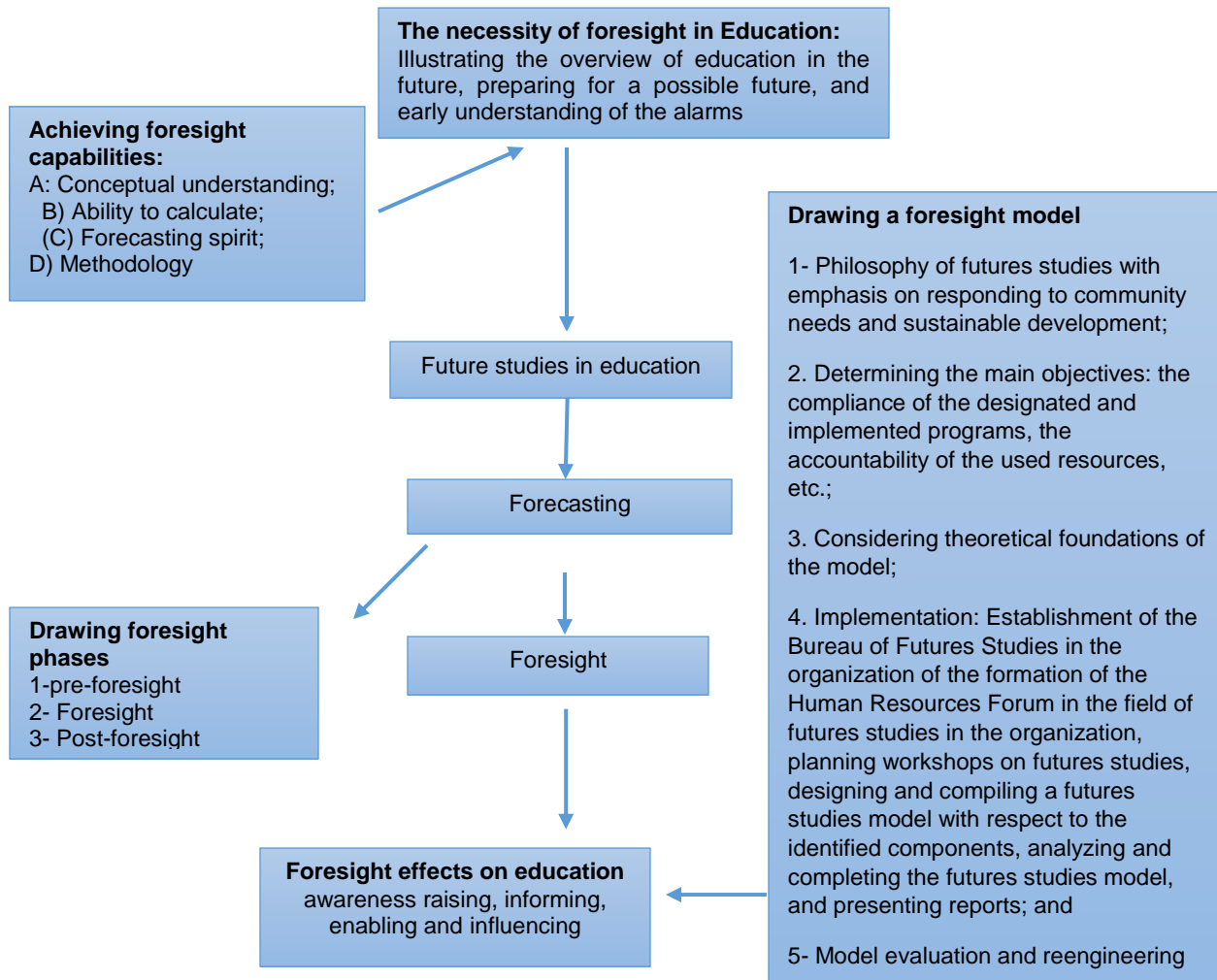


Figure 1: Futures Studies Framework in Education

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