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A Review on the end of 21 Courses and Average in the 21st Century, Book Analysis, Evaluation and Reflections on the Education System

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Abstract

Although the modern understanding of science proves that individuals learn in different ways, individual patterns are in our institutions; Based on misunderstood beliefs, from education to the workforce, he continues to believe that statistical averages are sufficient to understand individuals and describe their unique abilities. Taking into account documents such as standardized tests, grading, creating a resume for job application, differences in institutions and organizations are ignored in performance reviews and as a result, they fail to measure their success capacity. In the study, the role of artificial intelligence and biotechnology in the reshaping and design of education is emphasized in order to show how the potential of the world and everyone can be rethought by focusing on individual findings rather than group findings or averages related to the science of the individual. In this study, the reflections of book evaluations on the education system are discussed in the context of recent developments in education. In this context, it is thought that this study will contribute to the thinking of how to make learning processes more effective by questioning the traditional education paradigm.

INTRODUCTION

The vast majority of the responsibility for individuals to adapt to norms lies in education. Educational institutions may need to be reshaped in accordance with the requirements of the age in order for students to realize their full potential. In the 21st century, the values envisaged by education have

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gained importance in the international dimension as well as national values. Advances in science have continued to increase in the 20th century, and the technological products that emerged as a result of scientific discoveries have greatly affected human life. Access to information has become easier through technology, and it has become advantageous to shape it towards a democratic approach based on mutual interaction between people. Distance education processes, which take place with the opportunities provided by technology, also give individuals the opportunity to turn to a department they are interested in or to reveal a talent that they have not realized until then.

Technology-Assisted Learning (TSL) is defined as the incorporation of technology into learning environments that can enhance knowledge, skills, and attitudes (Wu et al., 2013; Ahmed & Opoku, 2022). Technology-assisted learning is not limited to the effective use of software and applications; it is a well-structured approach that takes into account learning goals and objectives, which also includes the integration of technological devices to increase the student's achievement of educational goals (Corte, 2004; Zheng et al., 2019; Ahmed & Opoku, 2022).

Education systems at the international level are expected to create frameworks that emphasize the development of competencies, knowledge and attitudes necessary to achieve success in the 21st century. For example, in the United States, employers and policymakers have argued that American high schools "fail to produce the 21st-century graduates necessary to compete and succeed in an increasingly complex and interconnected world" (Achieve, 2010; Martinez, 2022).

As can be seen from the above-mentioned explanations, the teacher is 21. It is one of the stakeholders with the most important responsibility in the interpretation and implementation of curricula within the scope of century skills and in the evaluation of their effects on the student. From the point of view of the fact that the skills that students should have in the developing world should be high-level skills, teachers should also have these competencies in parallel with this and the institution they are in should support these competencies.

Literature

Overview of Topics "21 Lessons for the 21st Century"

21 Lessons for the 21st Century discusses the following questions in order to cope with the unprecedented technological and economic disruptions and unremitting changes of our century (Harari, 2018):

- How will computers and robots change what it means to be human?
- What can we do in the face of fake news?
- With data constantly watching us, how can we reclaim our freedom of choice?
- If we cannot understand the world, how can we distinguish between right and wrong, right and wrong?

- Is it possible to find a solid ethical ground in a world that transcends our horizons, revolves entirely outside human control, and casts a shadow over all gods and ideologies?
- Can nationalism be a panacea for the problems of inequality and climate change?
- What kind of skills do we need in an age where old narratives don't collapse and are not replaced by new ones?

Harari (2018) addresses these and other very basic questions(s) in 21 chapters, clarifies the political, technological, social and existential difficulties in the context of the views he put forward in his previous works, and examines the liberal narrative, communism, nationalism and many other narratives from different aspects throughout the chapters of the book and evaluates the position of each of them in the conditions of the 21st century.

Among the targets of the liberal narrative that is widely adopted today;

- Suffrage,
- Facilitating the global movement of individuals, ideas, and goods
- Located.

The wars and the situation of the refugees are one of the issues that draw attention in the book that there is still a long way to go in terms of the free movement of individuals.

Algorithms

Increasingly, we are leaving our choices in the hands of algorithms. Just like the next music to listen to, the next link to click in the research... In this context, the frightening future that awaits society is the loss of our ability to make decisions for ourselves. Until now, our abilities such as estimating time and finding directions are becoming as atrophied as possible with the development of tools, equipment and services that no longer need these abilities. With the development of artificial intelligence, the same may be true of our ability to make decisions for ourselves.

Harari (2018) argues that at some point, intelligence and consciousness are different things and that artificial intelligence cannot gain consciousness. A report published in Businessinsider (2015) supports this claim in the following aspect: *It is mentioned that a robot has passed the "consciousness" or "self-awareness" test for the first time. The experiment is as follows: two out of 3 robots are muted. Then, all 3 robots are informed that "2 robots have taken silence medicine" and cannot make any sound. The robots are then asked, "Who hasn't taken the silence drug?" The robot, whose voice is left on, first says "I don't know", then changes its answer to "I didn't get it" when it hears its own voice.* Of course, this is a primitive example, but it is thought-provoking about the possibility of artificial intelligence gaining consciousness (Chong, 2015).

Social Competition and Inequality

Social competition continues to revolve around things that are not basic needs. As Harari (2018) points out, it will continue to be so. While this competition focused on the things that money could buy for a while, with the spread of the internet and free virtual services, it started to show itself in areas such as social media awareness, where money cannot buy. This situation makes us think about what will happen if it starts to be experienced in the field of biotechnology, health and even immortality instead of social media.

Data & Information

The importance of data and information for companies has been mentioned for years. According to Harari (2018), information will become the most important asset in the economy. This brings up a debate about how to distinguish fact from fiction and how to know what is useful and what is not useful from petabytes of data. Harari (2018) stated that we should trust the information you pay for more than the free one, as the information provided for free can be biased and misleading.

Of course, it is not voluntary training institutions that can be biased here, but organizations that aim for advertising. For this reason, it is recommended to follow scientific articles as much as possible in order to reach real information. Instead of simply imparting information, the education system should provide the ability to transform many pieces of knowledge into a meaningful whole about the world (Harari, 2018).

Education

21 Lessons for the 21st century; It covers many different topics such as Work, Freedom, War, Religion, Humility, Justice, Ignorance, Education.

Overview of Topics "The End of the Mean"

The focus of the book is; Instead of equality of opportunity, it is based on equal harmony. All this begins with restoring the principle of individuality. The book begins with a historical overview of where the concept of average came from and how it has influenced the thinking of the human species in all fields over the past 200 years.

In the second part, there are three principles as an alternative to the use of averaging:

According to Rose (2016):

• Variability is the rule: perceptions and reactions are much more dynamic and varied than previously thought,

• Emotions matter: emotional states affect learning,

• Context is key: conditions influence behavior,

• Feedback loops determine success or failure: small changes make a difference.

"The assumption that average-based benchmarks, such as academic GPA, personality testing, and annual performance reviews, reveal anything meaningful about our abilities is embedded in our consciousness in a way that we can never question." However, as Rose (2016) argues, this assumption is incorrect.

The book is divided into three parts:

The history of the average,

Individuality

Principles of individuality in practice.

It is revealed that science is a rising star in the new field and is a mathematical fact with practical consequences. However, even though we know that people learn and develop in different ways, these unique patterns of behavior still persist in our schools and businesses designed around the mythical "average person."

Any measure is based on the idea that there is an average. Namely;

GPAs, standardized tests, performance approval assessments, overweight, all kinds of measures are based on the idea that there is an average, and you are measured and evaluated based on how much you deviate from it. Another example is; is that drivers can adjust their car seats in three different ways: they can push the entire seat up or backward; They can move the base of the seat up or down, and they can tilt the back of the seat forward or backward. These adjustments allow the car seat to be adjusted to the specific needs of the individual driver. At first glance, this adjustment doesn't sound particularly revolutionary, but it still supports the example of the rejection of one of the defining features of our end-of-average, adjustable seating society.

As can be understood from the examples, it is explained that the value of the question-oriented interdisciplinary approach should be emphasized according to the questions that may be had, while addressing how stronger and more effective teaching and teacher education programs should be, going beyond the traditional program models that teachers need to know in order to be successful. According to Rose, recognizing the learning potential of the future is the first step to success. Variations in course work are not very necessary.

Rose (2016) discovered an exam that she could prepare for at her own pace and tried this route to measure her achievement. However, Rose (2016) did not blame the counselor teachers, saying that it was necessary to be "average" for the job, and that it was troublesome to treat people uniquely, considering that the teacher was going down this route.

Redefining Success

In Todd's TED talk at Myth of Average (url-2); It reveals that schools are designed on the basis of average. The problem, however, is that no student is average in all dimensions. According to Rose (2016), average-based school designs destroy talents because they do not challenge advanced students and do not enhance the strengths of students with certain weaknesses. In this context, it advocates the development of the Individual Talent Model as well as the creation of technology standards for education in accordance with the science of the individual.

Student-centered learning (An Education Full of Diversity and Options)

There is always a relationship between teacher and student, as well as a strong sense of community within the classroom as a whole.

- It is a space where students have access to a wide range of subjects that meet their pathway needs and interests.
- In every subject, students have the right to access learning experiences that allow them to progress according to their ability level.
- It is an opportunity for students to make decisions about their learning aspects; For example, they can choose how they want to write the topic on which to research for an assignment, the book for book talks, and the procedures for lab work.
- It is a dynamic learning opportunity that provides students with content that meets their personal learning needs based on their interests, parental inputs and teacher observations, as well as the most important element, assessment data.

Are students managing their own study schedules and daily schedules to stay on track, so they are taking their courses on their own pace and individualizing their learning paths and intervention plans.

- Students are using personal learning tools, such as mobile devices, to personalize their learning and improve communication in the school community.
- It is because the school community includes multiple layers of support.
- Students interact and collaborate with each other and with the content.
- It emphasizes teachers interacting with content, teachers, and other teachers.
- It necessitates the social-emotional connections established between students and teachers as the basis for their work together.
- Various starting points within the context mean various amounts of guided practice and independent practice as needed.

When considered in the dimension of education; A learner profile includes three elements:

Transcript of speeches: Grades, courses (and/or learning levels), state and district achievement data.

Personalized learning information: Supplementary achievement data, record of services received, feedback on work habits, registration of extracurricular activities, and work/service experiences.

Student work portfolio: Collection of personal best study products.

Student profiles will benefit students with learning differences. According to Rose, that's all. Profiles, if managed by parents, can maximize personalization and privacy. Using a free mobile app, parents can give read/write access to multiple providers to the profile.

Online profile management is gaining importance in all aspects of life, it is a new digital literacy competence that every young person should learn to exercise. This starts with allowing parents to be responsible for their training data with a portable learning profile.

Each "principle of individuality" is explained by 3 principles that are tangible changes that a school district can consider to better personalize learning:

Jaggedness Rule

Roughness, according to Rose, is the idea that "we can't apply one-dimensional thinking to understand something complex and jagged." In this case, Rose defines "jagged" as the property of having poorly correlated dimensions.

It illustrates this feature by using contrast with respect to the human body versus size. Height is one-dimensional: You have only one height and can be measured objectively against the heights of others. On the other hand, the body is made up of many characteristics such as weight, height, width, length of limbs, among others. Therefore, the size of man is jagged.

When this example is to be associated with education; In a traditional classroom, we can see a lot of thoughts that are not jagged. For example, when you go to any school, we see children of all sizes and weights, but almost all student desks are the same. More innovative schools are working to meet needs through flexible classroom seating and alternative furniture that meet the changing physical needs of students. For this reason, one of the first activities to be done should be to redesign the classroom area.

Beyond the physical space, we also see schools implementing co-teaching models that recognize that teachers' teaching skills are not sufficient. In these schools, the two teachers are likely to have teaching strengths that are strikingly different. By teaching together, they determine their responsibilities according to their expertise in order to make the work more fun and benefit the students (url-1).

In Middletown's Grown City School District, elementary school teachers have developed instructional features by collaborating with their peers to provide students with more effective learning experiences. This example supports our thinking.

If-Then: The Context Principle

When this section is examined, we see that the perspective of the individual has also changed. When we consider fixed mindset statements such as "person A is smart" or "is bad", Rose argues that these statements are the opposite; It suggests that personality traits and skills should be considered with conditional if-if statements.

Rose argues that looking at personality or abilities in context "*allows us to deal more productively when we see our child, employee, student, or client engaging in negative behaviors that we want to change.*" "*Instead of asking why they behave the way they do, we can reframe the questions in terms of context and ask ourselves, 'Why are they behaving the way they are behaving in this context?* "It suggests that the question be asked. This concept has a direct application in how teachers handle behavioral problems in a classroom.

When applied more generally to personalized learning in terms of education; For example, if a teacher has a three-station rotation model in their class, it may allow the teacher to group students more effectively – rather than assessing average student performance across all stations – that reflect how specific students at each station are performing. A teacher can also use this perspective to encourage student reflection and ownership of learning, which is also part of the Core Fourth component of Personalized Learning. By asking students to think about how they learn and behave in different settings, a teacher can help students become more intentional about choosing a particular class station, asking questions, or collaborating with peers. When students gain a better understanding of how their learning habits change in different environments and are given their choices, they are empowered to positively impact their learning experience.

Ways

Each student can choose from different career-related courses that suit their interests. Rose's argument is that "It states that there is no singular and correct path for any human process". Accordingly, when considered in the context of the education system, some schools move away from the idea of "one way for all". One tactic to support different learning paths in the classroom is to give students the opportunity to demonstrate mastery of knowledge in different ways. Instead of requiring all students to take a quiz to ensure they understand a concept, teachers can allow students to choose between a project, essay, or test. This freedom encourages students to demonstrate knowledge in a way that best suits their preferences.

Results

The reflections in the book "The End of the Average" provide an important roadmap for dealing with the current challenges in education. These considerations challenge the "one way for all" mentality in education and encourage personalized learning. For educational leaders, this represents a transformation that needs to be integrated into the entire education system, not just classroom instruction. To make these shifts in education, educational leaders must first move away from fixed mindsets and focus on understanding students' different learning styles and needs. Aside from that, they should go beyond the belief in "one right answer or way" and create an environment that allows students to find their own way in the process of exploring and learning. This approach can change the paradigms in education, providing students with a more effective learning experience. It can keep students motivated by focusing on their personal interests and strengths, thereby encouraging them to learn more successfully. Additionally, this approach allows students to better understand and direct their own learning processes, which can help them become more independent and effective learners.

In this context, an important part of the training consists of work to be done in the dimension of behavior. In this context, when human capacity is developed and the policies followed for development are followed, the organization achieves its goal. Reform and renewal activities to be carried out by taking into account the dimensions of purpose, structure, process and organizational culture, which constitute the four most important basic dimensions in an organization, should primarily serve the objectives of the institution. Establishing the structure, creating an effective and efficient management system, and achieving a positive result by involving the corporate culture, students, employees and all stakeholders in the process only works if it serves the purpose.

Suggestions

- Students can be encouraged to develop their ability to adapt to technology and think innovatively by giving them the opportunity to think about the effects of technology on humanity and to analyze how future professions may take shape.
- Educational programs can be organized for students to distinguish the right information and evaluate the sources,
- In education, digital citizenship skills can be developed by teaching students to understand the consequences of their online behavior and data sharing.
- In education, students can be developed to understand and solve complex problems by providing them with the ability to understand and evaluate different perspectives.
- In education, interactive discussions and projects can be organized to develop awareness of global citizenship and social responsibility.

- In education, interactive and experiential learning methods can be applied to students to develop 21st-century skills such as critical thinking, problem-solving, communication, and collaboration.

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