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Enhancing Education in The 21st Century: The Role of Quality Teachers in Theory and Practice

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Abstract

Globally, the function of the teacher has changed since the turn of the twenty-first century. The teacher, who has become accustomed to serving as a leader, an instructor, and a source of knowledge, must now modify his or her job to fit the demands of learning in the twenty-first century. In order to make lessons engaging and dynamic for instructors in the twenty-first century, this article will give an outline of prospective excellent teachers, effective learning, learning abilities, and learning theories. Higher level thinking, meaningful inquiry-based learning, cooperative cooperation, effective communication, creativity and innovation, and digital literacy are characteristics of 21st-century learning. In order to prepare students with superior cognitive skills to meet the demands of a real-world education, this paper proposes that teachers should be trained in contemporary educational practices and learning theories.

Keywords: Collaboration and teamwork, Communication Creativity, Critical thinking, 21st-century imagination, learning problem-solving skills

Introduction

The education sector has seen significant changes as a result of the fourth industrial revolution, sometimes known as Industrial Revolution 4.0. Education will inevitably change because it must adapt to changing circumstances. All educational procedures, including curriculum development, must take into account the needs of the twenty-first century. For a sustainable future, the twenty-first century requires a multitude of skills, knowledge domains, and social and personal values to be attained. The future is uncertain because change is constant. (Schwab, 2017)

Still, it is essential to get ready for the potential future and to make the present better. It is therefore essential to get ready to give the twenty-first-century generation the values, knowledge, and abilities they need to pursue lifelong learning. The responsibility for completing this assignment rests solely with educators. Teachers, especially those in higher education, have the responsibility of carrying out the necessary actions to accomplish the required goals. In particular, teacher educators must accept the difficult work of letting go of the outdated perspective and fostering the new one known as "Education 4.0." (Murphy & Riggio, 2003)

Future Teachers of Excellence

Good teachers generate good instruction. Given the need for instruction that is both relevant and meaningful, high-quality instruction is imperative. Students especially want to make sure that they receive a high-quality education that gives them the values, information, and skills necessary for both lifetime professionalism and gainful

employment. The goal of this programme is to generate competent educators with the values, abilities, and knowledge necessary for future pedagogical endeavours. A few clear activities in the instruction and comprehension context, contrasted with the current or traditional context, signal this new era. (Keengwe & Kungu, 2019)

It is anticipated that twenty-first-century educational methods will surpass twentieth-century ones. Zeichner (2012) contrasts the potential characteristics associated with learning in the twenty-first century with a few aspects of educational in the twentieth century. Inspired by the transformations Zeichner depicted, this research will investigate and scrutinise the components that will be employed to build the pertinent framework. (Monereo, 2022)

Difference between 20th Century Education and 21st Century Education

According to Arias et al., (2019) The transition from 20th-century education to 21st-century education reflects significant shifts in teaching methodologies, learning environments, and educational priorities. Here are some key differences between the two:

Focus on Memorization vs. Skills Development

20th-century education often emphasized rote memorization and knowledge recall. In contrast, 21st-century education prioritizes the development of critical thinking, creativity, collaboration, communication, and problem-solving skills to prepare students for a rapidly changing world. (Arias et al., 2019)

Teacher-Centred vs. Student-Centred

Traditional 20th-century education was teacher-centred, with educators as the primary source of knowledge and authority. 21st-century education promotes a student-centred approach, where teachers act as facilitators, guiding students in inquiry-based and participatory learning experiences. (Arias et al., 2019)

Use of Technology

Technology was limited in 20th-century classrooms, with a reliance on traditional teaching tools like textbooks, chalkboards, and overhead projectors. 21st-century education embraces technology integration, with interactive whiteboards, educational apps, online resources, and digital collaboration platforms enhancing learning opportunities and encouraging digital literacy. (Arias et al., 2019)

Content Delivery and Instruction

In the past, 20th-century education was typically characterized by lectures, note-taking, and standardized assessments. 21st-century education employs diverse instructional strategies, project-based learning, experiential learning opportunities, and personalized learning pathways tailored to individual student needs and interests. (Arias et al., 2019)

Global Awareness and Cultural Competence

21st-century education places a stronger emphasis on global awareness, cultural competence, and a broader understanding of interconnected global issues. Educators in the 21st century strive to prepare students to be global citizens who can navigate diverse perspectives, collaborate across cultures, and contribute positively to a globalized society. (Arias et al., 2019)

Life Skills and Future-Ready Competencies

While 20th-century education focused primarily on academic knowledge and subject-specific content, 21st-century education recognizes the importance of teaching life skills, socio-emotional skills, and future-ready competencies. Skills such as adaptability, resilience, digital literacy, critical thinking, creativity, communication, and teamwork are highly valued in 21st-century education to equip students for success in a dynamic and competitive world. (Arias et al., 2019). Overall, the evolution from 20th-century education to 21st-century education reflects a shift towards student-centred, collaborative, technology-integrated, and skills-focused learning experiences that aim to prepare students for the complex challenges and opportunities of the contemporary world. The terms "effective teacher" and "quality teacher" are used interchangeably in this study.

Nilsen et al. (2022) conducted a survey on the characteristics of a good teacher in 23 nations regarding educator effectiveness. The survey's participants included educators, learners, guardians, administrators, and public servants. The United States, the UK, Africa, Middle Eastern nations, Europe, Japan, and Singapore provided the data. Five characteristics stood out among others as those that these nations generally believed were significant. The following characteristics of an effective teacher are shown by the survey report:

- The capacity to build dependable, fruitful partnerships
- A calm, considerate, and kind nature
- Expertise
- Subject-matter expertise 5. Learner expertise

The order of importance for these attributes is as follows. In the study by Nilsen et al. (2022), the efficiency of instruction varies depending on the situation, hence there is no set formula. One of the characteristics of a successful teacher has been shown to be knowledge of the students. A teacher's pedagogical practices are influenced by the way a student learns. Effective learning is a result of effective teaching. As a result, learning effectiveness influences teaching effectiveness to some degree.

Efficient Education

According to Vaughn and Bos (2012), Effectiveness is a relative phrase. It is contingent upon "for what" and "for when." It only makes sense in relation to the objectives and circumstances. Modern objectives include greater self-direction and participation, a greater variety of tactics, a more introspective approach to learning, a more developed vision of the learner's future, more opportunities for collaborative learning, a more positive attitude towards learning, and other positive values. Both in-classroom and after-school learning are included in the contexts. Thus, it is appropriate to refer to learning that involves the following steps as "effective learning";
Establishing further goals; reflecting on one's own learning and learning strategies; examining how learning contexts have contributed to the effectiveness of learning; connecting what has been learned in various contexts; and participating in learning with others (Vaughn & Bos, 2012).

Thus, receiving high-quality instruction helps students to learn new material and apply it to the creation of new knowledge. Effective instruction encourages students to think critically and take an active role in their education. Collaborating with others, active learners enhance performance. (Sandars et al., 2020). Several learning theories are cited in order to gain a deeper understanding of the behaviours and responses of learners during the learning process. Prior to delving into the theories of learning, it may be beneficial for us to look at the skills that are prioritised in this endeavour. These are some of the competencies that have been designated as 21st century competencies. Making sure that these ideas have similarities that promote efficient teaching and learning is the main goal of these talents. (Saunders & Wong, 2020)

Acquiring Knowledge

Twenty-first century talents are defined and interpreted differently by different people. However, the definition that explains the ideas pertinent to this study shall be used for its purposes. The definition encompasses the information, abilities, and values that are fundamental to the project and is consistent with the study's guiding principles. Due to their perceived ability to advance and improve the calibre of instruction, these ideas are prioritised. The pertinent ideas have been selected from several sources that are grounded in research. The Hanover Research team (2011) looked at six distinct frameworks for abilities relevant to the twenty-first century. These frameworks' original sources were:

- Tony Wagner's Global Achievement Gap Seven Survival Skills
- Partnership for 21st Century Skills
- Engauge
- Connecticut Department of Education's 21st Century Skills
- Assessment and Teaching of 21st Century Skills (ATC21S)
- Iowa Essential Concepts and Skills - 21st Century Skills

The Hanover Research team examined the main elements of these frameworks for 21st-century skills in order to determine the overlaps and disparities between them. They also looked at the most and least popular skill types, classifying the skills based on how frequently they were used. The findings showed that, of the 27 themes that emerged from the six sources of information, only four were shared by all six sources. These were the following:

- Collaboration and teamwork
- Creativity, imagination
- Critical thinking
- Problem solving

Five out of six sources mentioned communication abilities. Nonetheless, "technology literacy" is also covered in this study in light of Education 4.0. The Hanover team of researchers found evidence of this competence in four out of the six avenues they looked at.

The figure below illustrates the 21st century abilities that this programme covers.

The hypotheses covered in this study shed light on these abilities. A thorough explanation of each skill category for this study's operational needs is necessary for additional illumination.

Collaboration and Teamwork

Working as a team to accomplish a goal is referred to as collaboration. Here, skill, knowledge, and astute work combine. The intricacy of contemporary companies demands that problem-solving techniques involve teamwork. Customers, clients and suppliers are dispersed throughout the world, thus in order to finish projects, products, or programmes, relationships must be created. (Thomas, 2023). In the classroom, collaboration can occur when students work in groups.To succeed, educators and students must collaborate to exchange ideas and to provide and receive feedback. Information and communication technologies can be used to improve collaboration; this is a useful tactic as the globe grows more interconnected. Working together is essential for career success and lifetime development. (Pollastri et al., 2019)

The capacity for collaborative work is vitally crucial. Working in collaborative settings is essential for instructors and students to promote critical thinking, problem solving, and creativity. Teachers that work together will be able to exchange ideas for lesson plans and advance their professionalism and methods of instruction. They will be enabled to raise the behaviour and attitudes of their students as a result. (Jcte, 2023)

Problem Solving

The twenty-first century demands the acquisition of new abilities. Problem-solving abilities are highly valued by employers when recruiting recent grads. Students require the necessary skills to tackle difficult difficulties in the classroom. Before attempting to answer a problem, students must first determine the issue, assess it, and determine the extent to which it can be resolved. Subsequently, they must consider other approaches to solving it. In the end, they must decide on the most practical and successful strategy to overcome it (Hashim et al., 2019).

According to Sukadaria et al. (2020), this talent needs students to use a variety of resources to tackle complicated problems. The modern, fiercely competitive world demands the capacity to leverage a variety of resources. Research is necessary to address today's problems, as is the selection, assessment, and organisation, consideration of options, and information interpretation. To solve complicated problems, learners must gather knowledge from several fields. Learners must be independent and have higher order cognitive abilities in order to solve problems effectively.

Communication Skills

Proficiency in both writing and oral communication is essential for positions in academia, government, and business. In order to communicate information, convince, persuade, or explain, interpersonal communication abilities are required. Students could feel at ease during informal oral conversing with their peers but doing so in formal or technical contexts could have the opposite effect. As a result, students must be ready to handle difficulties in the place of employment in the near future. These difficulties might not be foreseeable. To overcome these obstacles, students must rely on their communication abilities to articulate their ideas succinctly and effectively. Speech-based motivation is highly regarded in the business and in society at large. (Grubb & Hemby, 2018)

In professional settings, written communication abilities include the ability to write reports, emails, and memoranda. The writing abilities that students acquire in the classroom must be transferable to the workplace. As a result, students ought to be able to draw parallels among what they learn in school and what is applied in everyday life. Collaboration is a great way to build communication abilities. When connecting with people, interpersonal or social communication skills are crucial. Proficiency in social and intercultural skills is crucial for efficient communication. (Green, 2018)

Critical Thinking

According to Redecker et al. (2011), critical thinking is essential to learning in the twenty-first century. Critical thinking is defined in a variety of ways. The Coalition for 21st Century Skills states that critical thinking entails the following abilities among others:

- Effectively applying different forms of reasoning depending on the circumstances
- Examining the interplay between constituent elements to determine overall results.
- Forming conclusions and making decisions based on the analysis and evaluation of arguments, facts, assertions, and beliefs
- Resolving various issues in both traditional and creative methods.

Additionally, critical thinking makes use of other abilities like information literacy and communication. For students to find high-quality resources in both official and informal education, critical thinking and digital literacy skills are essential. Outside of the classroom, People must weigh the facts before making decisions and exercise responsible judgement (Pillay, Singh & Yunus, 2020).

Creativity and Imagination

As part of the critical thinking process, creativity entails coming up with novel and practical solutions to problems. It is crucial for staying up to date with the difficulties and changes of the modern world. High degrees of practical competence, profound factual knowledge, and original thought are all necessary for creativity. It also calls for judgement and critical thought. The dynamic process of creativity entails testing, linking, and refining ideas across disciplines. (Viola, 2023). Creativity in the classroom is advantageous to both educators and learners. A creative educator encourages pupils to think creatively while discovering new things by making lessons engaging and

interactive. This has a profound impact on pupils' learning and has practical applications. Furthermore, kids' social and emotional abilities are enhanced through creativity. (Murala, 2024)

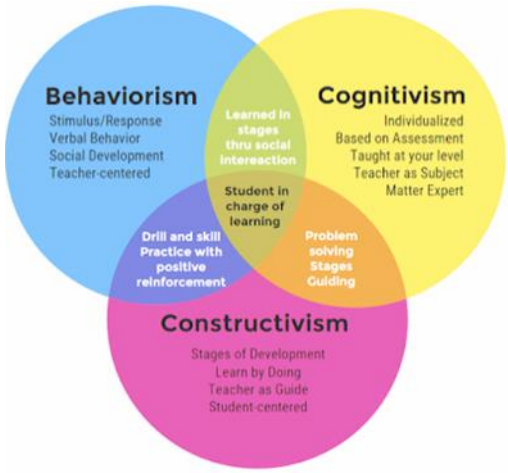
Students who are creatively developing can express themselves freely and feel proud of themselves for what they have accomplished. Educators can foster creative thinking by posing open-ended questions to their pupils. It also enhances students' ability to solve problems by empowering them to consider other options, which results in wiser choices. Working creatively and collaboratively can enhance confidence, lessen stress and anxiety, and diminish all three. In general, in the modern classroom, creativity is an essential tool for students as well as educators. (Wegerif, 2010)

Technology Literacy

Digital literacy is a component of twenty-first-century technological literacy. Technical proficiency is only one aspect of digital literacy; other knowledge includes understanding the problems, customs, and mindset around the use of particular technology. The development of technology in the modern environment forces educational establishments to incorporate initiatives that foster digital literacy. Information and communication technologies will be available for use by educators and students as media for communication or as information resources. These are the abilities that are thought to be essential in improving instruction and learning in the current context. They will be looked at in the context of learning theories that back up the tertiary level educational approaches. (Oecd, 2021)

Learning Theories

The theories that support methods of teaching and learning that enhance educational quality are examined in this study. These theories inform current educational practices and provide an explanation of how learning is currently understood. Emphasis is placed on 21st-century abilities and the significance of comprehending the ideas and application of a theoretical framework is emphasised. A thorough comprehension of these theories enables the selection of instructional strategies that improve the efficacy and efficiency of learning. Since personal intuition is frequently skewed and constrained, there is an increasing need for formal theory to be used more effectively in advancements. The developed guiding principles are informed by multiple theories and demonstrate the efficacy of these tactics. (Okech & Rubel, 2018)



Theories of learning have been created based on ideas and opinions about how people learn. For several decades, theories behaviourism, cognitivism, and constructivism in particular have dominated

the field of education. Their pedagogical contributions have been substantial, and their influence can still be seen today. Nonetheless, in order to meet the demands of 21st-century education, it is necessary to investigate other theories of learning in order to validate the recommended style of instruction. In the twenty-first century, learning requires a more engaged and rigorous approach from the student. Alongside some established theories and models come new ones. Strong conventional theories that are pertinent to this research include constructivism, cognitivism, reflectivism, and connectivism because they all have components that promote teaching and learning. (Merriam & Baumgartner, 2020)

Cognitivism

Jean Piaget is credited for developing the cognitive learning hypothesis. The foundation of cognitivism is the thought process that underlies behaviour. According to this hypothesis, people do more than just react to stimuli; they also process the information they are exposed to. Processing information cognitively is employed when a student actively seeks out strategies for comprehending, processing, and connecting newly acquired knowledge to prior knowledge and stored information in the memory. This notion is put to use in the classroom when students participate in discussions and problem-solving exercises. Students are assigned problem-based assignments, and the teacher serves as a facilitator. The instructor guides the class in asking questions to obtain data and analyse it to make inferences. Critical thinking is urged of the students. Active discovery learning is used to carry out the mostly student-centered activities (Singh et al., 2020).

Constructivism

According to Council et al. (2015), social contact and context are essential for the development of cognition. According to the notion of constructivism, students build, interpret, and rearrange their knowledge. Under cultural and social contexts, they actively engage in making the connection between what they learn in the classroom and what they already know. To gain more knowledge, learners engage in interactions with knowledgeable people, such as instructors and fellow students. Active learning is promoted in the classroom through inquiry, comprehension, and creation through group-based activities. Knowledge is the result of combining doing and thinking while thinking back on prior experiences. students collaborate with peers under the guidance of a teacher, learning, mental growth, and knowledge are ingrained in a particular social and cultural environment.

Reflectivism

Reflectivism and constructivism are not entirely dissimilar. In actuality, it both incorporates constructivism and takes it a step farther. Reflection is the process of recalling prior experiences, taking into account all relevant facts, and assessed in order to make a choice. Critical thinking of previous or present classroom experiences is a component of reflection. It includes asking questions about what was effective or ineffective, what inspired pupils, and other issues pertaining to teaching and learning. Reflectivism is more concerned with teaching, whereas constructivism is more

concerned with learning. Reflectivism allows teachers to be more flexible in their instruction by analysing their own accomplishments and shortcomings in supporting students' knowledge construction through inquiry. (Lamont, 2021)

Connectivism

While technology has affected learning beyond the person, cognitive, constructive, and reflective theories concentrate on the processes of individual learning. Due to the expansion of knowledge brought about by globalisation, students now need to evaluate the value of what they have learned. Students need to synthesise relationships between several subjects and develop patterns of relevant information. Siemens (2005) highlights the value of using a variety of sources and learning for the future. To get information, learners use internal as well as external networks, including the internet. The advent of novel technologies for communication and information has spurred more cooperation and communication, underscoring the necessity of employing a variety of information sources for forthcoming educational requirements. (Yu et al., 2020)

Integration of Theories

Deep meaning is more important in the twenty-first century than superficial meaning. In order to facilitate an educational and educational programme that moves from surface becoming what you deep learning, teachers are essential. Recalling surface learning entails knowledge, but deep learning calls on students to connect or expand on concepts, make decisions, and exercise critical thought. As a result, deep learning gives students the ability to create knowledge by expanding on what they already know. Technology helps to further improve deep learning. In order to acquire 21st century skills, ICT (information and communication technology) utilisation is essential. (Moll et al., 2022)

Conclusion

Teachers have options when it comes to their instructional tactics according to the theories covered in this section. They have the option of adhering firmly to one theory or incorporating ideas from other theories. Selecting the latter would undoubtedly improve their instruction. Every theory covered in this Common component in this section include teamwork, problem-solving, and critical thinking.

By applying these theories, educators will be able to create more effective teaching methods that will encourage students to learn deeply. Therefore, in order to promote in-depth and engaged learning, teachers must gain a thorough comprehension of the ideas that underpin these theories.

REFERENCES

Arias, O., Evans, D. K., & Santos, I. (2019). The Skills Balancing Act in Sub-

Saharan Africa: Investing in skills for productivity, inclusivity, and adaptability. In *Washington, DC: World Bank and Agence française de développement eBooks*.

Breen, P. (2018). *Developing Educators for the Digital Age: A framework for capturing knowledge in action*. https://doi.org/10.16997/book13

Cohen, D. J., & Scheinfeldt, T. (2013). Hacking the academy: new approaches to scholarship and teaching from digital humanities. *Choice Reviews Online*, *51*(03), 51–1215.

Gray-Rosendale, L. (2018). Re-examining constructions of basic writers' identities: graduate teaching, new developments in the contextual model, and the future of the discipline. *Journal of Basic Writing*, *37*(1), 81–108.

Green, A. (2018). *Ask a manager: How to Navigate Clueless Colleagues, Lunch-Stealing Bosses and Other Tricky Situations at Work*. Hachette UK.

Grubb, R. E., & Hemby, K. V. (2018). *Effective communication in criminal justice*. SAGE Publications.

Hanover Research Team. (2011). Bringing 21st Century Skill Development to the Forefront of K-12 Education.

Jcte, N. E. (2023). JOURNAL OF CONTEMPORARY TEACHER EDUCATION (JCTE). *Journal of Contemporary Teacher Education*, *6*(1).

Keengwe, J., & Kungu, K. (2019). *Handbook of Research on Cross-Cultural Online Learning in Higher Education*. IGI Global.

Lamont, C. (2021). *Research methods in international relations*. SAGE.

Lehman, J. G. (2009). *International teachers in the American classroom: deposing the myth of monolingualism*. https://doi.org/10.37099/mtu.dc.etds/91

Merriam, S. B., & Baumgartner, L. M. (2020). *Learning in adulthood: A Comprehensive Guide*. John Wiley & Sons.

Monereo, C. (2022). *The identity of education professionals: Positioning, Training, and Innovation*. Dialogical Self Theory.

Murala, D. K. (2024). METAEDUCATION: State-of-the-Art Methodology for empowering feature Education. *IEEE Access*, 1.

Murphy, S. E., & Riggio, R. E. (2003). *The future of leadership development*. Psychology Press.

Nilsen, T., Stancel-Piątak, A., & Gustafsson, J. (2022). *International Handbook of Comparative Large-Scale Studies in Education: Perspectives, Methods and Findings*. Springer Nature.

Oecd. (2021). *PISA 21st-Century Readers developing literacy skills in a digital world: Developing Literacy Skills in a Digital World*. OECD Publishing.

Okech, J. E. A., & Rubel, D. J. (2018). *Counselor education in the 21st century: Issues and Experiences*. John Wiley & Sons.

Pillay, L. A. M., Singh, C. K. S., & Yunus, M. M. (2020). Hots for Teaching and Learning in a Teacher Education University. International Journal of Psychosocial Rehabilitation, 23(4), 347-363.

Pollastri, A. R., Ablon, J. S., & Hone, M. J. (2019). *Collaborative problem solving:*

An Evidence-Based Approach to Implementation and Practice. Springer.

Sandars, J., Correia, R., Dankbaar, M., De Jong, P., Goh, P. S., Hege, I., Masters, K., Oh, S., Patel, R., Premkumar, K., Webb, A., & Pusic, M. (2020). Twelve tips for rapidly migrating to online learning during the COVID-19 pandemic. *MedEdPublish*, *9*, 82.

Saunders, L., & Wong, M. A. (2020). *Instruction in libraries and information centers: An Introduction*.

Schwab, K. (2017). *The Fourth Industrial Revolution*. Penguin UK.

Sukadaria, Prihonob, E. W., Singh, C. S. S., Syahruzahd, J. K., & Wue, M. (2020). The Implementation of Character Education through Local Wisdom Based Learning. International Journal of Innovation, Creativity and Change, 11(4), 389 403.

Thomas, K. (2023). *On college student success, living-learning communities, and self-regulated learning: an interpretative phenomenological analysis*.

Vaughn, S., & Bos, C. S. (2012). *Strategies for Teaching Students with Learning and Behavior Problems*. Prentice Hall.

Viola, L. (2023). The Humanities in the Digital: Beyond critical digital humanities. In *Springer eBooks*.

Wegerif, R. (2010). *Mind Expanding: Teaching for Thinking and Creativity in Primary education: Teaching for Thinking and Creativity in Primary Education*. McGraw-Hill Education (UK).

Yu, S., Ally, M., & Tsinakos, A. (2020). *Emerging technologies and pedagogies in the curriculum*. Springer Nature.