

CHAPTER TWELVE

Glocalisation of Africa's Untapped Heritage from Primary to Tertiary Education: Community Service of Higher Education

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<https://doi.org/10.54908/iljs.cisp2026.10.01.012>

Abstract

Higher education is the bridge that connects town and gown; they delve into the corners to turn ideas into opportunities. Higher education instruction should, therefore, encourage pupils to experiment. To preserve the slowly deteriorating cultural values and increase the chances of cooperative inquiry-based learning, creative problem-solving, and creative activities, the GLOCALISE strategy, which combines global and local values, should be employed. When youngsters are not exposed to a culture, it dies too soon. As a result, all educational levels should incorporate the idea of glocalisation into their curricula. At the primary level, this should take the form of a role-playing or storytelling approach; at the secondary level, it should be project-based; and at the tertiary level, it should be problem-solving. Each level's various concepts ought to be connected to a proverb, idiom, artefact, antique, custom, or culture. Contextualised learning makes a lot of sense; it is enjoyable for students and fosters critical thinking and teamwork. Therefore, this paper examined how the GLOCALISE strategy is using crowdsourcing to explore some African cultural heritages globally (locally and globally) while creating tools for teaching and student involvement that are available to educators, parents, and other interested stakeholders. GLOCAL professionals update and validate the curriculum, assessment, and instructional materials. It is envisaged that this strategy will foster the creative minds of Africans and turn unexplored African history into invaluable gems for the world.

Keywords: Glocalisation, Unmined Heritage, Community Service, Higher Education

Introduction

When the colonial masters came to Africa, they gave and took. Among what they gave was cultural erosion, while what they took, they claimed its birth right. Adaptation of what they termed barbaric in our culture became the stepping stone of their civilisation in Medicine, Information and Communication Technologies (ICTs), Computing Systems (CS) and more. *Aroko*(hieroglyphics), the African ICT and CS, as derived from *Ifa* Binary Systems in Yoruba culture in Africa, are typical examples. The premise of this paper though is not to cry over spilt milk, but to reposition our cultural heritage in the global stage through Glocalisation. To Glocalise is to dig deep into our rich cultural heritage to develop new or enrich existing areas of science and technology. A culture that is hidden from children goes into extinction too soon.

Globally, some values are universal while locally some are specific to different cultures and traditions. To synchronise these values and bring out the uniqueness in them, the term GLOCAL refers to a blend of global and local values, ideals, resources, games, play, riddles, poems, proverbs, hieroglyphics, stories, songs, arts and antiques for learning concepts in universal and specific contexts. This is an effort to connect the slowly vanishing old African cultural values with the social and educational ideals of today. This calls for increasing involvement by creating a network of educators, subject-matter experts, local and cultural specialists, government organisations, parents, school administrators, and other interested parties to discuss ways to increase learning opportunities for students while promoting the development of community values.

Glocalise approach embraces cultural phenomena and tools to triangulate ideas in the vast and culturally diverse African setting. Key components of the learner-centered contextualised learning paradigm are inquiry-based learning, learner engagement, and learner-context. It encourages students to actively engage in their education and places a strong emphasis on placing learning within their life experiences and immediate surroundings. It requires student participation through practical exercises to guarantee that students acquire knowledge of scientific ideas and transform them into problem-solvers. In order for students and teachers to work together on problem-solving and inquiry-based projects and become creators of novel practices and

methodologies, it is implied that pedagogical techniques and practices are established creatively and flexibly.

In education, glocalisation refers to the use of a learner-centered approach to explore local context to teach global content while producing new and outcome-based glocal (Global and Local) content resources. Examples of this include refining the products of cultural practices and creating local versions of modern technologies, expanding the inventive scientific discoveries from indigenous cultural heritages, and proposing laws based on cultural insights.

It is, therefore, essential to incorporate the idea of glocalisation into the curriculum at all educational levels, enhancing it with imaginative exercises that address pressing issues in our local setting. Our setting becomes global, and our education becomes meaningfully outcome-based when students acquire and use their abilities to improve our immediate surroundings. Teachers and students both become creative innovators rather than merely polite consumers. Our goal at glocalise is to learn about the global scene to create a local scenario and promote on the glocal arena.

Anchored instruction, also known as situated cognition learning, active learning, discovery learning, constructivism, cooperative/collaborative learning, connectivism, experiential learning, design-thinking, and many more theories support GLOCALISE. Adedokun-Shittu, AbdulKabir and Nuhu, (2018) succinctly described that discovery learning is inquiry-based approach that encourages learning by doing, through observation and organised activities that is guided or unguided by a teacher in a way that makes it viable for problem-solving. Constructing new knowledge through learning activities revolving round student experiences, dialogue, doing and observing is promoted by active learning model. Cooperative/collaborative learning develops support skills in students rather than competitive skills. Connectivism is a theoretical construct for learning in the digital era focused on creating connections and networks to facilitate learning among diverse people and communities for cooperative, peer and team collaborative learning. Experiential and design-thinking models adopt problem/project-based learning approach to ensure students experience learning by doing and tinker as they apply theories and concepts in real life problem-solving situations.

Constructive review and practical implementation of these theories in real life situations can produce fruitful learning outcomes in students while also

studying phenomenon, drawing conclusions, confirming or rejecting prior notions and making observations that may subsequently develop into novel concepts and fresh models. Global norms encourage the discovery of new information, while Africa's poorer nations are still confined to repeating what has already been discovered. It is time to stop our next generation from starting from scratch. Instead, let us take a big, brave step toward producing knowledge while politely absorbing that which has already been produced. This can begin when we instill in our kids the values of observation, inquiry, problem-solving, teamwork, and solving issues on their own instead of just consuming old stories that were created by the great minds of the past. We need to start producing the brightest minds of our own and the next generation!

How exploratory will it be to teach encryption, image representation, programming by exploring *Aroko* (African hieroglyphics), permutation and combination through *ayo olopon*, *lanka lanka* (hopscotch) for programming and algorithmic functions, *odu ifa* and *ayo olopon* for teaching binary representation, create unique audio clips with musical instruments such as *ilu* (drum), *apala*, *fuji*, *dundun*, program a virtual human to perform dance moves (*bata*, *gelede*) through trigonometric functions, counting rhythm beats “*Eni bi eni, eji bi eji, eta nta gba, erin woroko*,.. to teach elementary counting?” Consider using *lanka-lanka* (hop-scotch) to teach "addition"—in fact, the entire BODMAS—for addition and subtraction, then *tente*, *tinko*, and *okoto tita* to teach multiplication and division. Consider sayings that relate to ideas in biology, chemistry, or physics. ‘*Laalaa to roke, ile lo nbo*’ - a Yoruba proverb explaining perfectly the ‘Law of Gravity’. *Yoo bale, yoo bale ni labalaba fii wo igbo* – an incantation line describing the concept of weight. The Archimedes principle of physics, *Iromi to n jo lori omi, onilu re wa nisale odo*, describes the upthrust that occurs when a body is submerged in a fluid. *Okere to gun ori ope ree le tente, oju to ile oju to oko* – a squirrel that glances from atop a palm tree, it could see far and wide - (Satellite Communication), *eegun atiro wole, eeyan atiro jade; tani komo pe eegun atiro to wole ni eeyan atiro to jade* - a limping masquerade enters, then a limping person exits, isn't it obvious that it's the limping person that is disguised as the masquerade - Quadratic equation.

All these are in our tradition; we need not wait for an Oyinbo man to call it ETHNOCOMPUTING for us before we adopt it. Dr Ron Eglash came up with

the concept of Ethnocomputing or culturally situated learning to get students to learn to solve problems in creative ways through the use of Culturally Situated Design Tools (CSDT). The CSDTs are web-based software applications that allow students to create stimulations of cultural arts (Eglash, et.al., 2006).

Through this glocalise approach, students will be involved in several in-depth projects to demonstrate application of several scientific and computing concepts in real-life situations. These would ultimately allow them to utilise appropriate tools and methods to carry out in-depth research and gain insights into developing algorithms to solve real- life problems while also reviving our lost cultural glory.

The Glocalise Teaching Methodology

The old model of learning facts passively and then reciting them out of context is no longer enough to prepare students in today's world. Solving complex problems involves fundamental skills (reading, writing, math) along with other 21st century competencies such as teamwork, time management and the use of digital tools. Realinfluencer, (2019).

Glocalise has benefitted from the 21st century teaching methodologies, which are summarised below, and which are revolutionalising learning environments world over while also promoting innovative approaches by educators.

Flipped Learning

Flipped learning or classroom is a reverse pedagogical approach where the primary educational materials are studied by students at home, which are then further discussed in class to optimise time spent on a lesson in order to meet the special needs of each individual student, develop cooperative projects or work on specific tasks.

Cooperative Learning

Cooperative Learning ingrains the “Stronger together” concept in students; building team-spirit in them that working in group improves involvement and acquisition of knowledge and successful accomplishment of tasks. Groups of 3 to 6 members is formed and coordinated by the teacher with each member handling specific task(s) in order to achieve the set objective(s).

Gamification

Gamification is gaining more ground in curriculum and classroom environment. It is one of the bases of edutainment in EdTech industries.

Design Thinking

Design Thinking (DT) helps curricula developers, teachers, researchers and industries to collaborate, tinker, research, innovate, create, problem-solve and bring about reform in teaching methodologies in the classroom and development in the society.

Thinking-Based Learning

Thinking-Based Learning (TBL) methodology develops effective thinking skills in students beyond mere rote memorisation and regurgitation of content. It teaches students to contextualise, analyse, relate, argue, convert information into knowledge, knowledge into working skills and skills into innovative implementation.

Problem-Based Learning

Problem-Based Learning (PBL) is an iterative learning process which begins by asking questions and exploring ways to solve the identified problem. It is an inquiry-based learning with which students develop critical thinking, creative skills and problem-solving knack through quests and knowledge sharing.

Project-Based Learning

Project-Based Learning (PBL) is a classroom innovation that uses experiential learning models and design thinking to get students involved in learning activities that are focused on outcomes. Through projects that address real-world issues without compromising curriculum content, it helps students gain knowledge, skills, and competences. In contrast to the conventional theoretical and abstract paradigm, PBL flips the teaching process by beginning with a tangible problem. It helps students retain information while fostering 21st century skills including communication, critical thinking, and teamwork in problem solving. While the teacher offers guidance and support throughout the project, PBL encourages students to plan, organise, carry out, and present the project's outcome. *“PBL today represents the best didactic guarantee for*

an effective contribution to the development of students' key competencies"
Realinfluencer, (2019)

Competency-Based Learning

Competency-Based Learning (CBL) is a collection of tactics used to accomplish the three main objectives of all learning approaches: knowledge acquisition, skill development, and the creation of operational standards. With CBL, tool kits such as teaching devices, assessment rubrics, curriculum roadmap, and training guide are collaboratively developed by teachers and students and operationalised in real- life practices, giving students a concrete dimension to their learning.

All these strategies are learner-centred. The efficiency and effectiveness of instructional process takes place while the teacher interacts with the learners through explanation, exploration, experimentation and discussion while students gain competency in the three Cs of the 21st century (communication, critical thinking and collaboration). Learning as an activity takes place while the student's mind is actively engaged through a series of well-structured experiences. Teachers prepare the lesson in an activity-based approach and guide the students to self-discover concepts contextually. Teachers need to consider certain crucial factors while adopting learner-context approach as successfully implemented in a study by Adedokun-Shittu, Abdulkabir, Nuhu (2018). These include teachers: recognising the fact that students are not empty vessels and they emanate from an environment where their lived experiences can complement their learning, if creatively and constructively connected to concepts; collaborating with colleagues and students both physically and virtually. They are expected to come up with relevant ideas to teach different topical issues in varying subjects; exploring language, culture, childhood games, proverbs, as rich resources to learn from and relate subject concepts to and to facilitate contextual understanding. This requires teachers to be grounded in both subject content and local context, engaging students to take active role in their learning rather than passive listener in class. These interactive and student-engaging activities should be provided for in the lesson plan, making ample provisions for relevant problem-based and inquiry-based activities for each topic. These can be achieved more effectively if students' observation from the activities are carried out form their notes or diary.

Flipping the classroom with web resources such as videos, audio, texts, real setting excursion could also be employed to complement contextual teaching.

Having studied and used many methodologies available globally for 21st century learning, GLOCALISE carefully adapted the following methods to our local context. These methods are discussed as applied by GLOCALISE across all levels of Education in Nigeria.

Glocalisation of Education at the Basic, Secondary and Tertiary Levels of Education

Basic education, secondary school education, and university education are the three main levels of education in Nigerian society, Africa, and the rest of the world. Children between the ages of four and fourteen are typically offered basic education, which includes three years of early childhood and development education, six years of primary and junior secondary schooling, three more years of senior secondary schooling, and four or more years of tertiary education (Nwangwu, 2012). The Nigerian educational system is divided into three promotional levels, according to the National Policy of Education: postsecondary education, post-basic and career development (PBECD), and basic education. Pre-primary education, primary education, junior secondary education, and early child care development education (ECCDE) make up basic education.

Technical and vocational education and training (TVET) and senior secondary education make up the PBECD. University education, teacher education, technological education, and innovation enterprise institutions are all considered tertiary education (Federal Republic of Nigeria, FRN, 2014). It is crucial to stress that students are expected to accomplish a variety of goals and objectives at each level, including the development of suitable mental, physical, and social skills and competencies that will enable them to make valuable contributions to society.

What Should Students' Learning Experience Be Like? Discovery in Learning

What excitement is felt by a child and parents as the baby takes his/her first step? The baby is our student, while the parents are the teachers. That's the excitement every student and teacher should experience in every class.

MESSAGE: Discover something new in every topic you explore with your students. Let our students EUREKA!!!. Teachers also become part of the learning experience; they become partners in discovery. He/she searches for appropriate resources for contents to explore, design relevant problem-based classroom activities for students, prepare the activity guide for every flipped learning, design rules and procedure for game-based learning and provide guide for students' diary. All these are entrenched in the roles designated for teachers as: Facilitator, Designer, Collaborator, and Learner (ISTE – International Standards of Teacher Education, 2022). Rather than copying teacher's note, students should develop their diaries from observations made during the exploration or activities. Teachers in turn analyse the content of the resources provided, critique students' diary, compare their observations, note some inconsistencies in their submission and reconcile them.

At the Primary level

Storytelling, replicating moonlight tales is an effective learning strategy for primary school age pupils. Story-telling is a fascinating method of capturing and sustaining students' attention. When relevant stories are told in class it brings out meaningful moral lessons that will allow students to link subject content to local context. Story-telling could also lighten the tension in subjects presumed to be difficult and boring. Interactivity is also ensured with story-telling when students are requested to contribute the moral lessons of the story or relate it to the topic of discourse. The story of how Noah's Ark was constructed could come in as teachers teach floating, students marvel at how a gigantic ark could stay afloat on water and practice how to make a boat, paper boat etc. More fun is added to the class if the story has songs with stanzas to chorus. It becomes much more fascinating if the story is accompanied by a song to be chorused by the pupils e.g. *Asirin toun tokere, joo mi jo, awon ni won jo nja, joo mi jo....*

Game is an activity-based method of capturing students' cognitive involvement in the topic or subject to be taught. Both physical and computer-based games serve the purpose of fun and educative engagement of the students in the topic. Many of the childhood games we played can seamlessly come to play while teaching. Besides improving the cognitive and social skills of students, games can impress a meaningful and permanent experience about the lessons on the students. GLOCALISE games include: "*Eni bi eni, eji bi*

aji, eta nta gba, erin woroko,.. to teach elementary counting” lanka-lanka (hop-scotch), ayo olopon, binary, for addition/subtraction, tente, tinko, okoto tita, to express BODMAS.

At the Secondary Level

Teach Thinking: use computational thinking strategies – procedural or algorithmic skill.

Thinking Activity:

Now, take your pencil and paper:

Calculate this:

Add up all the numbers from 1 to 200 in just 1 minute.

MESSAGE: Provide activities that make your students think and solve problem not just rote memorisation.

YOU might just be NURTURING OUR own EINSTEIN

What triggers thinking? QUESTIONING!

- In the thinking activity above,
Did I provide CONTENT or CLUE?
Did you get my message or not?

Did it make you ACTIVELY THINK or PASSIVELY receive my message?

Questioning is a skill used by teachers to engage and interact with students on a subject matter. It can prompt students’ reasoning and guide them to observing certain phenomenon, demonstration activity or experiment. It prevents teachers from spoon-feeding their students on every topic but prompts students to be active participants in their learning. Puzzles and riddles are brilliant contextual way of engaging students in critical thinking; they can be used to question students to guide their thinking on a particular subject/topic. Riddles like: *Opa tinrin kan ile okan orun kini o?* Ojo – meaning: ‘a thin staff reaches the sky and the earth, what is it? - Rain’ to teach ecosystem. Trigger students while teaching ecosystem to explain why Yorubas will say “*a kii bu sango ni eerun*”, no one abuses the sango deity in the dry season? Because no rain, nor thunder in the dry season, so it has no implication because thunder will not strike in rainless season. Use proverbs

that go along with concepts in Physics, Chemistry, Biology. '*Laalaa to roke, ile lo nbo*' - a Yoruba proverb explaining perfectly the 'Law of Gravity'. *Yoo bale, yoo bale ni labalaba fii wo igbo* – an incantation line describing the concept of gravity. *Iromi to n jo lori omi, onilu re wa nisale odo* - relating the upthrust that exists when a body is immersed in a fluid that's Archimedes principle in Physics. *Ayo okoto* – game of Oscillation. – What is the rationale?

Whenever you state a LAW in class? Do you allow your students to question WHY?

Our answer can't be – that is how the law is stated? QUERY why and discover the rationale.

MESSAGE: Let's create our own NEWTONs.

Look inward into students' lived experiences, relate them to concepts you teach, challenge them to think in that direction, generate inspiring activities to achieve curriculum content.

Sublimation – don't define

– Carry out experiment (shear butter, camphor, air freshener)

Let them record their observations and put up their own definition (students' diary)

Student-diary - rather than teacher's note develops students' constructive ability, it encourages them to develop their literary skill and better understanding of concepts taught. In activity-based or inquiry-based learning, students' observation should be noted themselves. Further explanation given by teachers would also be developed in their own language then, assessed by the teacher to clarify their misconceptions and wrong interpretation. In this method, students can retain the understanding of the concepts they formulated themselves compared to reading and memorising teachers' note. This method may be faulted for indolence on the part of the teacher. However, it requires more active teacher involvement in the students' work.

Don't Write Notes That Can Be Found in Textbooks or Even on the Internet

Flipping is a method that requires students to consult additional resources like Internet resources (video, audio or textual), or even educational television and radio programmes, on topics to be discussed later in class. They would be

given study guide and questions on what to focus on in the resources given. They could also be required to conduct some activities based on the content learnt in the resources and they will eventually develop their own notes from the resources reviewed. Thereafter in class, the teacher will spend the class time interacting with the students on the flipped material – discussing the study guide and questions, answering conflicting queries from students, analysing the activities given and assessing students' notes. This method ensures maximum and judicious utilisation of class time without any fear of not completing the subject syllabus.

At the Tertiary Level

Experiential Learning - Impactful Learning

- Picture this scenario –
 - 1. You heard about a ghastly motor accident
 - 2. You witnessed a ghastly motor accident
 - 3. You were involved in a ghastly motor accident, but THANK GOD!!! You SURVIVED.

What's the experience in each situation?

How long will the effect in each case last?

Which has the most lasting IMPACT?

MESSAGE: Create a more lasting IMPACT in every lesson

Chinese Maxim: What you hear, you forget; what you see you remember; but what you do, becomes part of you make your students active not passive

Outcome-Based Learning

Apprenticeship Approach

- Which do you prefer? 1 or 2?
 - 1- A child learns auto-mechanics in 5 years, become a road-side mechanic-can fix any car. The best in town.
 - 2- A child goes to university for 5 years, learn all theories of auto-mechanics-can't fix a loose bolt in his car.

Now, which is better 1 or 2?

- What's the point?

I learn all the laws of electricity but I can't apply it?

That's the question every student should ask you (Teacher/Lecturer)

Message- Help your students learn, apply and change the world for better.

Your student might be the next world celebrated inventor

Message: make your lessons concrete

We'll marvel at our discoveries

Theorists and law proponents in this field observed real life situations as they encountered them in practice and documented them for future references. What references will our future engineers leave behind if all they do is to study for grades? Quite pathetic that we roll out graduates with first class and second class upper year in year out without substances to show with the exception of a few though. As teachers, how do we turn around this situation? While we teach, let's create problems for students to solve. Just like a naughty young boy will break his father's radio and assemble it back, whether it works or not, he made an effort. After all, Thomas Edison tried to invent the light bulb 9999 times before he succeeded the 10,000th time. So, teachers should provide an avenue for their students to try and make mistakes; let them document all the trials and errors they make, what differ in each stage, in each trail. Perhaps, eventually, they will make an edge way. Not at every error would the teacher intervene, but we should provide further guide, tip or ask prompt questions that will channel a possible direction. As they venture into this discovery learning, they will consult previous textbooks, theories, laws; and the theoretical knowledge we teach in class will eventually be learnt along in their adventure. As they do this, it becomes part of their experience - not the 'la cram la pour' syndrome.

Seem quite Unrealistic? Pedagogical Implications of GLOCALISE Approach

- No time to complete the syllabus?
- No resources to achieve these?
- Too many students in class?

To achieve this seemingly unrealistic approach, Adedokun-Shittu, Abdulkabir, Nuhu, (2018) guided teachers on how to discountenance passive Learning Objectives (LO), create and focus on active SMART (Simple, Measurable, Attainable, Realistic and Timely) objectives, by subsuming the passive LOs under the active LOs and thereby achieving more than the curriculum stipulates. Avoid LOs like define concepts, list or state..., substitute with - demonstrate how the concept works in real life, explain the algorithmic process of achieving such concepts and describe a simple activity that explains the concept, design a game to enliven the concept, relate the concept to real life, day to day activities. When these higher order LOs are achieved, lower ones are automatically catered for.

Assessment also changes with the GLOCALISE Approach. The UNESCO International Bureau of Education IBE (2013) glossary of learners' assessment is adopted. "Assessment as learning" encourages learners to self or peer-reflect on their learning. "Assessment for learning" adapts the educational processes to meet learners' needs, identify learners' strengths and weaknesses and provide support to reinforce them. "Assessment of learning" in the form of standardised tests or centrally-set examinations to assess learners' achievement for certification is used to fulfil standardised education requirements and for GLOCALISE learners to compete favourably with their peers locally and globally. "Assessment of learning outcomes" uses varying methods - tests, oral or written, projects and portfolios to assess students' attainment of learning outcomes. GLOCALISE uses a reverse assessment by laying more emphasis on "Assessment of learning outcomes" as an integrative assessment approach by engaging students in problem/project-based activities, which systematically subsume other forms of assessment. A problem/project-based activity on a topic in class will have taken learners through assessment as learning through questions and activities that prompt self and peer reflection. Assessment for learning through provision of relevant GLOCAL support resources like proverb, artifacts, real life scenario, flipped resources from web links will reinforce learners' weaknesses and fortify their strengths on the concept. Students' observations noted in their diary will be verified with validated sources such as textbooks and web resources. All these would have prepared learners with the cognitive, affective and psychomotor abilities to intelligently solve any problem encountered in standardised tests no matter how craftly structured they are.

With the GLOCALISE approach, curriculum remains unsafe from changes. There is need for radical restructuring of the curriculum and deepening involvement from government, parents, school administrators and all stakeholders in education. Students and parents' active engagement is paramount; teachers become comfortable with a changing role as a coach and facilitator, no longer a sage on the stage and school administrators become understanding partners in this approach. Consequently, the nature of lesson plan, class structure and teacher-orientation changes, syllabus and curriculum restructuring become inevitable, textbook redefinition is crucial and definitely, assessment will not be limited to summative test and measurement, it becomes an all-inclusive learning and outcome-based assessment.

Higher Institutions and Community Service Role

The connection between town and gown in higher education provides community and collaborative services to transform our education sector to the tinkering sector for human and capital development. The iterative model in figure 1 explains the GLOCALISE Outcome-based Learning Strategy, which shows how the **the** Faculties of Education in our tertiary institutions should play a crucial role in training teachers across all levels of education to explore African culture for educational transformation. The Faculties are expected to give students perceptive hints and questions to encourage critical thinking, develop creative activities through problem/project based solutions, transform projects into prospects, thereby making African education meaningfully outcome-based.

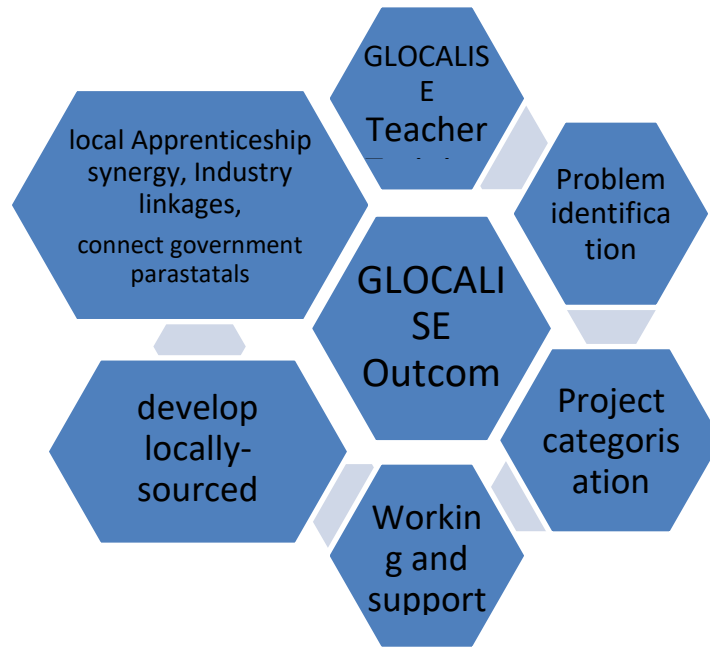


Figure 1: GLOCALISE Outcome-based Learning Strategy (GLOCALISE, 2023)

The GLOCALISE Strategy for achieving outcome-based learning thus should identify problems across society, form interdisciplinary working group, distribute tasks, create professional support groups, identify locally-sourced materials to develop prototype solutions, foster synergy with local skilled workers and upscale apprenticeship, link up with industries to provide support, then connect relevant government parastatals to adopt the outcome as a national achievement, and finally promote internationally, especially through social networks and global exchange programmes. This will monumentally impact on Quality Education as entrenched in the Sustainable Development Goal (SDG 4) of every community adopting GLOCALISE Outcome-based Learning Strategy.

Acknowledgements

Tertiary Education Trust Fund (TETFund) is specially acknowledged for the Institutional Based Research (IBR) research grant awarded for the GLOCALISE project. University of Ilorin is appreciated for sponsoring the presentation of GLOCALISE report in the KU8 Conference.

References

- Adedokun-Shittu, N.A., Yusuf, M.O., Mejabi, O.V. Olasehinde-Williams, F.O.A, Abdul Raheem, A.M.O., Shittu, A.J.K, Abdulkabir, A.I., Ajani, H.A, Nuhu, K.M., Koledafe, O.S, (2023). Globalisation of the Teaching of Science: A Crowdsourcing Call. Nigerian Online Journal of Educational Sciences and Technology, 5(1). 175-186. <https://www.nojest.unilag.edu.ng>
- Adedokun-Shittu, N.A., Abdulkabir, A.I., Nuhu, K.M. (2018). Enhancing STEAM Teachers' Pedagogical Skills using Contextualised Approach. In *Contemporary Issues in Science, Technology, Engineering, Arts and Mathematics Teacher Education in Nigeria. A Festschrift in Honour of Professor Isaac Olasunkanmi Abimbola*. Page 185-200. Published by the Department of Science Education, Faculty of Education, University of Ilorin, Nigeria.
- Alismail, H. A. & McGuire, P. (2015). 21st century standards and curriculum: current research and practice. *Journal of Education and Practice*, 6(6),150-154.
- Bruner, J. S. (1957). *Going beyond the information given*. New York: Norton.
- Eglash, R., Bennett, A., O'Donnell, C., Jennings, S., & Cintorino, M. (2006). Culturally Situated Design Tools: Ethnocomputing from Field Site to Classroom. *American Anthropologist*, 108(2), 347–362

- Federal Republic of Nigeria (2014). *National policy on education* (6th Revised Edition). Lagos : NERDC press
- Realinfluencer, (2019), 8 methodologies that every 21st century teacher should know. Retrieved on 1st August, 2023.
<https://www.realinfluencers.es/en/2019/05/09/8-21st-century-methodologies/>
- UNESCO (2013). Glossary of Curriculum Terminology. UNESCO International Bureau of Education, Geneva, www.ibe.unesco.org.
- Chris Zook, (2017). What Are ISTE Standards? And Why Do They Matter?
<https://www.aeseducation.com/blog/topic/computer-applications>