With the dawning of the 21st Century, we are facing more numerous and complex problems which require a radically different form of thinking: thinking that matches the complexity of the problems and demonstrates greater adaptability and sensitivity to divergent points of view. Our world is constantly changing, we are caught up not only in an increasing whirlwind of challenges and decisions, but threats, too. It is difficult to anticipate the knowledge or skill set needed to be successful at work, since we can no longer predict the types of jobs we will be doing. The complexity, speed of change and intensifying threats of contemporary life reveal the inadequate nature of traditional methods of learning. We need constantly to re-think, re-evaluate and re-learn the way we live and work (Paul & Elder, 2002).

In a world where we are daily faced with a glut of information often packaged to serve special interest groups instead of building the common good, citizens need to take charge of their own minds, to recognize their own deepest values, and to take action that contributes to their good and the good of others. In order to be able to do so, we must learn how to continually upgrade our knowledge and become life long learners (Green, 2015).

Uganda is one of the fastest growing countries and has the world’s youngest population. Educating young people to think critically is paramount not only for healthy growth of individuals, but also for the development of a democratic and just society. 
Enhancing critical thinking in Uganda

There is a clear gap between the learning outcomes achieved by Uganda students by the end of their formal education and the expectations of the society. Labour market surveys conducted in Uganda (Omala, Mitana, Giacomazzi, & Ariapa, 2016) highlight the demand for a workforce possessing soft skills and higher order thinking skills for employability and better life outcomes. For Uganda to have a more productive labour force, education ought to shift to a system that enables learners to engage, analyse and apply knowledge. The education system should emphasize life skills like critical thinking, problem solving, decision making, collaboration and social awareness, all of which have been identified by the World Economic Forum as crucial for the enhancement of not only employment, but of general productivity and efficiency. In this context therefore, it is valuable to form teachers on higher order thinking skills (with specific reference to critical thinking) and adapt simple instruments for fostering formative assessment at classroom level while assessing critical thinking in learners.
The LGIHE team conducted a study to investigate and to compare how Ugandans define and conceptualize critical thinking. The findings helped in the construction of a localized conceptualization model of critical thinking. The various dimensions of critical thinking can be represented in a schematic form (see side).

This model displays the various elements that contribute to a definition of critical thinking in the Ugandan context. The critical thinker (WHO dimension) should be endowed with self and social skills, dispositions, values and knowledge that are needed to become a better critical thinker and at the same time grow when the person exercises the critical thinking abilities (HOW dimension). The process of critical thinking is ignited by specific circumstances, challenges, or people (WHAT dimension) that are very specific to one’s social and cultural context (WHERE dimension).
The analysis of the findings of the contextualization study displays the complexity of critical thinking skills in Uganda. Even though a definition of critical thinking is not uniformly understood by the participants, it is surprising to note how critical thinking skills consistently surfaced in various aspects of everyday life. The participants mostly refer to critical thinking as a process of thorough thinking accompanied by keen observation of reality and a desire to move beyond the surface to discover the true meaning of things under consideration.

From the analysis of the interviews, it is possible to identify a number of characteristics that the critical thinker should possess that include skills, traits and values. The skills further cluster in two main categories: skills related to the self (self-awareness and self-management) and skills related to the relationship with the others (social awareness). What emerges is that critical thinking facilitates the ability of the person to relate with the others, to consider their perspectives and to find solutions to the challenges that respond not simply to one’s personal good but also to the good of the community. Furthermore, the analysis of the interviews shows how this cognitive skill is linked to dispositions and values that are important in the Ugandan society: independence of mind, patience, justice, truth, hope, honesty, passion, respect and motivation.

The elements of the critical thinking process that the findings underscore, are grouped into macro categories that are well aligned with process skills highlighted in the literature. The skills needed for deepening information gathered, analysing and evaluating are considered to be crucial in the literature and central to the critical thinking process.

Critical thinking is considered to be a key competency in the process of planning, setting goals, pondering consequences, solving problems, making decision, and activating creativity.

The relationship between critical thinking and knowledge, is extremely meaningful, though very prominent in the findings. Knowledge is, for Ugandans, a means for the enlargement of mind that critical thinking should foster and at the same time critical thinking is a means to increase the knowledge of self, others and the world (Davies & Barnett, 2015; Lai, 2011; Thomas & Lok, 2015).
Framework

CRITICAL THINKING

Personal Characteristics

Process

Strategizing

Knowledge
Framework

Critical thinking | activation model

Personal Characteristics

Self Skills
- Self Awareness | Emotional Awareness
- Self Confidence | Self Discipline
- Hard Working | Perseverance | Self Motivation

Social Skills
- Empathy | Perspective Taking | Communication

Traits or Dispositions
- Independence of mind | Patience

Values
- Wisdom | Hope | Honesty | Justice

Process

Strategizing

Knowledge
Framework

Critical thinking | activation model

Framework

CRITICAL THINKING

Personal Characteristics

Process

Strategizing

Knowledge

Information gathering

Observing | Going beyond the surface
| Questioning | Taking time

Analysing

Investigating alternatives | Assessing positives and negatives

Evaluating

Choosing among options | Expressing Judgment
Framework

CRITICAL THINKING

Personal Characteristics

Process

Strategizing

Knowledge

Pondering consequences

Planning

Goal setting

Creativity

Decision Making

Problem solving
Critical thinking | activation model

**Framework**

**Critical Thinking**

- **Personal Characteristics**
- **Process**
- **Strategizing**

**Knowledge**

- Of the Self
- Of the others
- Of the world
Framework

CRITICAL THINKING

Personal Characteristics
- Self Skills
  - Self Awareness | Emotional Awareness
    - Self Confidence | Self Discipline
    - Hard Working | Perseverance | Self Motivation
- Social Skills
  - Empathy | Perspective Taking | Communication
- Traits or Dispositions
  - Independence of mind | Patience
- Values
  - Wisdom | Hope | Honesty | Justice
- Information gathering
  - Observing | Going beyond the surface | Questioning | Taking time
  - Investigating alternatives | Assessing positives and negatives
- Analysing
- Evaluating
  - Choosing among options | Expressing Judgment

Process

Strategizing

Knowledge

- Of the Self
- Of the others
- Of the world

Self Skills
- Creativity
  - Planning
  - Goal setting
  - Decision Making
- Problem solving
  - Planning
  - Goal setting
  - Creativity
  - Decision Making

Self Awareness
- Emotional Awareness
- Of the Self

Empathy
- Perspective Taking
- Of the others

Independence
- of mind
- Patience

Wisdom
- Of the world

Hope
- Of the world

Honesty
- Of the world

Justice
- Of the world

Empathy
- Of the others

Perspective Taking
- Of the others

Communication
- Of the others

Decision Making
- Of the others

Problem solving
- Of the others

Creativity
- Of the world

Planning
- Of the world

Goal setting
- Of the world

Decision Making
- Of the world

Self Awareness
- Of the Self

Empathy
- Of the Self

Values
- Of the Self

Critical thinking | activation model
The LGIHE model of critical thinking adopts an holistic approach in terms of planning, implementation, and assessment that ultimately prepares a learner to face the world in a more meaningful way. This model considers the challenges, needs and resources of the education system, school leaders, teachers, students, and parents in the task of fostering critical thinking. The LGIHE approach facilitates a conducive environment aimed at enhancing the critical thinking competences and academic standards for learners in the Ugandan school system. This prepares a workforce that possesses both soft and high order thinking skills that are in great demanded for employability in the labour market and productive participation in a broader sense in society.

In a bid to promote quality learning in the Ugandan schools, the Ministry of Education and Sports, through the National Curriculum Development Centre, made curriculum reforms for the Lower Secondary school that emphasise, among other things, the fostering of critical thinking skills that allow young people to develop into life-long learners who can adapt to change and deal with the challenges of life in the 21st century. The reforms seek to bring deep knowledge and understanding of concepts, questioning techniques, evaluation, analysis, and creativity are, almost absent in Ugandan classrooms today.

To strengthen critical thinking throughout the educational landscape, LGIHE’s model proposes action at four levels; the national systemic level, institutional/training level, school level and classroom level.
Activation Model

The model represents a systemic collaborative process whose major aim is the realization of a self-assured learner who is a protagonist of highly developed judgement, evaluation, and problem-solving abilities in the cognitive, affective, and behavioural aspects of life. It proposes collaborative, dynamic engagements with various partners that LGIHE accompanies at the national, institutional, teacher and learner levels of the education hierarchy, with each level performing towards improved academic and life outcomes.

At the core of this model is the student who is the prime beneficiary of the educational programmes in schools. Students are helped to develop their critical thinking skills mostly in the interaction with teachers. Teachers, on the other hand, can be enabled or hampered in the implementation of effective educational programmes by the school leadership who is responsible for the educational plan of the school and guides teacher actions by setting specific explicit or implicit boundaries. The school leadership is, in turn, influenced by parent expectations that affects the vision, mission and culture of the school. Further, the national educational system has strong implications for school practice and it greatly impacts classroom activities through policies, curricula, and assessment systems.
At the national level, Ministry of Education and Sports (MoES), National Curriculum Development Centre (NCDC) and Uganda National Examinations Board (UNEB) formulate and operationalize policies that foster critical thinking skills among learners in Uganda. LGIHE collaborates in assessment reforms in national examinations, acting to promote greater inclusion of High Order Thinking skills questions and promoting a formative assessment policy for the end of cycle exams. Some LGIHE staff have received training from the NCDC on the Lower Secondary Curriculum and are collaboratively engaged in interpreting the curriculum to all subject teachers. LGIHE is also contributing to the revision of the Teachers Education curricula to promote critical thinking.

At the school level, school leaders and administrators create supportive environments for critical thinking skills in the teaching and learning of all subjects taught. This requires the school to have clear mission and vision statements recognising critical thinking as an important goal and explaining how it can be accomplished through professional development trainings. LGIHE is responsible for interpreting the concept of critical thinking and supporting the school leaders and teachers through a coaching system.

LGIHE believes education ought to produce independent thinkers. An independent learner is willing to reflect on what s/he is doing and its progress. A learner gains these skills only by engaging actively with the subject matter through asking appropriate questions of the material or issues at hand, investigating solutions to problems, creating new understanding as a result and then reflecting on the knowledge and competencies gained. With this model, LGIHE envisions students that exhibit skills in the main macro-critical thinking subskills that include, but are not limited to information gathering, interpretation, analysis, evaluation, inference, and strategizing.
References


