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Agent-based Self Study Centre Management Systems

By:-



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Overview of the Presentation Structure

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Terms and Definitions

- AIDS - Acquired Immune Deficiency Syndrome
- ALPBET - Alternative Provision of Basic Education and Training
- EFA - Education for All
- GOK - Government of Kenya
- HIV - Human Immunodeficiency Virus
- KICD - Kenya Institute of Curriculum Development
- KNEC - Kenya National Examination Council
- NESP - National Education Sector Plan
- SDGs - Sustainable Development Goals

“**Self-Study** also known as Self Directed Learning - A process in which individuals take the initiative in diagnosing their learning needs, formulating learning goals, identifying resources for learning, choosing and implementing appropriate learning strategies, and evaluating their learning outcomes” (Knowles, 1975)

Background of Study

- Education and training is one of the social pillars of the vision 2030, thus the responsibility of the education sector to create a knowledge-based society. It is in the light of this that The National Education Sector Plan, 2015 (NESP) stresses the need to reform Education to provide a range of learning pathways to support lifelong learning by children, youth and adults
- To achieve this there is need to ensure inclusive and equitable quality education that promotes life-long learning opportunities for all which is Goal 4 of the 17 Sustainable Development Goals (SDGs)
- The Government of Kenya (GOK) has embarked on a series of reforms to meet the demands of the Kenya Vision 2030 which include ensure provision of free and compulsory basic education to all children of school going age; Ensure access, equity and quality across all levels of Basic Education by 2020; Eliminate gender and regional disparities in Basic Education by 2017

Background of Study Cont'

- ▶ The GOK is keen on providing Alternative Provision of Basic Education and Training (APBET) to address the education needs of children and adults who are unable to attend the formal schools due to various social and economic reasons
- ▶ This answers why this study proposes to develop an agent based self study system to provide an alternate pathway in enhancing access to education. This system will give another chance to out-of-school youth and of adults and marginalized citizens whose formal education opportunities were cut short

Problem Statement

- According to NESP 2015, formal education is limited and it cuts out many people, who cannot qualify due to poverty as shown by global education fund where children are forced to drop out of school to provide for the family, girls are forced into early marriage and motherhood to raise their siblings
- There is overcrowding in counties where enrolment rates are high, and pupil teacher ratios and pupil classroom ratios in the public sector are over stretched beyond national standards
- Unsatisfactory progression both within and between education cycles as shown by the Cohort analysis from standard 1 to university education. This analysis shows that only 2% of pupils who enroll for class 1 actually progress to 1st year of university education
- There are also the problems of teacher absenteeism and lateness especially in rural areas, negative effects of the HIV and AIDS pandemic and rising repetition rates which drive learners away from secondary schooling

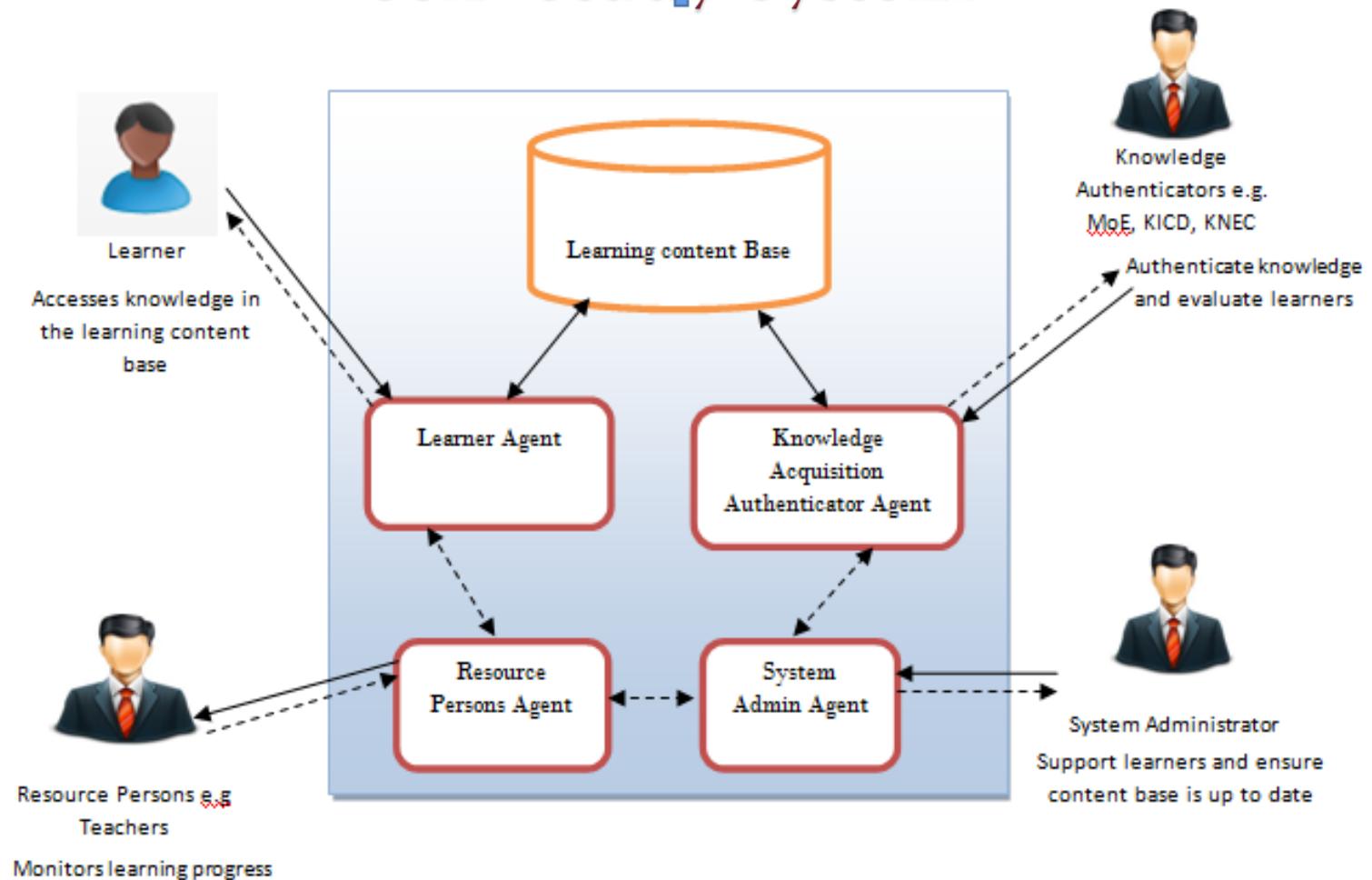
Problem Statement Cont'

- The Education for All (EFA) Global Monitoring Report (2010) indicates that despite the gradual improvement in enrolments rates, gender disparities in attainment of education still persist. This report estimates that 28 countries across the developing world have nine girls in primary school for every ten boys. Girls account for 54% of the children out of school
- Formal Education is prone to learning disruptions such as learners strikes, industrial unrests of resource persons and busy schedules at work
- NESP 2015 points out that the main issues facing the education sector are the challenges of access, equity, quality, relevance and efficiency in the management of educational resources
- This calls for reforms to integrate Innovation in an effort to meet the demand for global competitiveness and sustainable development
- To address these challenges this study seeks to develop an Agent-based Self Study Centre system to enhance learning and increase access to knowledge for all

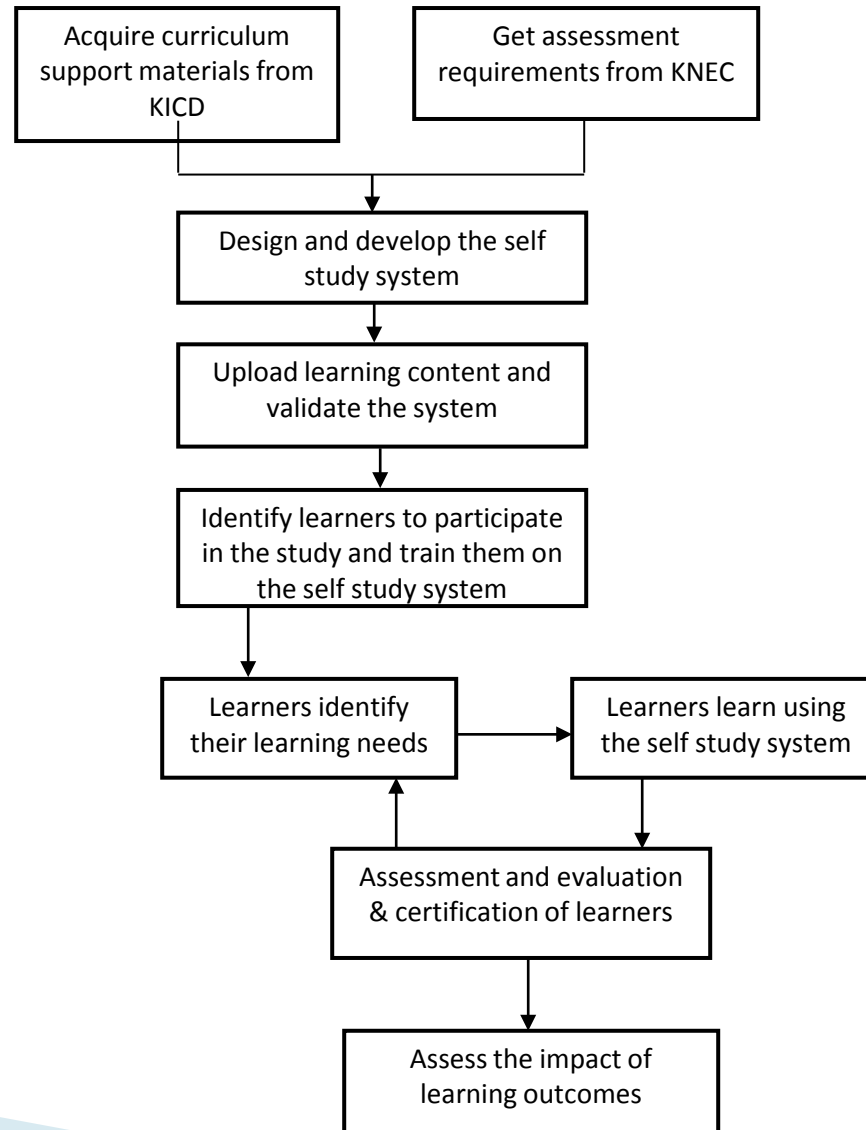
Objectives of the Study

- Study the education system and investigate the learning needs in secondary school education and formulate system requirements
- Assess learners perceptions on formal education and the challenges they face
- Assess the learners' e-readiness in terms of access to internet, ownership of devices such as laptops, tablets or smart phones
- Develop the Agent based self study system, implement and evaluate
- Assess the impact of the Agent based self study system
- Make recommendations on effective adoption of the self-study system to increase access to knowledge and learning opportunities

Proposed Architecture of the Agent-Based Self-Study System



Usage Model of the Agent-Based Self Study System



Significance of the Study

- Secondary education provides foundation skills essential for active citizenship, safe choices on personal health, participating in adult education, career advancement and lifelong learning programmes
- There is increased demand for secondary schooling due to the rising rate of primary education completion in many countries, thus enabling larger cohorts to become eligible for continued study at secondary education level (EFA Global monitoring report, 2015)
- The system will also meet the education needs of out-of-school youth and of adults whose formal education opportunities were cut short
- The system will provide equitable access to marginalized people who have difficulty accessing good learning environments or obtaining skills outside school
- The system will also harness the potential of available resources such as portable smart devices and affordable internet connectivity provided by mobile providers

Conclusions and Recommendation

- ▶ With Self-study learners will be able to take responsibility for their decisions associated with the learning endeavor. Learners will be able to do evaluation of their outcomes which will develop confidence in their own abilities and become more goal-oriented as they enjoy learning
- ▶ The Self-study system will increase access; quality education, flexibility and independence to learners despite poverty and age
- ▶ This research recommends adoption of the self study to meet the need of those who are less privileged and desire to pursue higher education later in life

References

1. Knowles, M.S. (1975). *Self Directed Learning: A guide for learners and teachers*. New York: Association Press
2. Republic of Kenya. 2010. *Constitution of Kenya*. Nairobi: Attorney-General
3. Republic of Kenya. 2007. *Kenya Vision 2030*. Nairobi, Ministry of State for Planning
4. Republic of Kenya. 2015. *National Education Sector Plan (NESP)*, Nairobi: Ministry of Education, Science and Technology
5. UNESCO. 2010. *EFA Global Monitoring Report 2010: Education for All: Reaching the marginalized*.
6. UNESCO. 2015. *EFA Global Monitoring Report 2015: Gender and EFA 2000-2015: Achievements and Challenges*.

Thank you