



SIWET SEB INSTITUTE WELDING & TECHNOLOGY

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SIWET EDUCATION OUTREACH

CONCEPT NOTE

Background

The SIWET Education Outreach is an intervention of **SEB INSTITUTE OF WELDING & TECHNOLOGY (SIWET)** and a response to the incessant theoretical focus of the Ugandan education system. Unemployment in Uganda especially among young people is partly a result of a mismatch between education and job demands. With many graduates lacking in skills despite graduating from universities and companies taking graduates through on job training, this indicates a major gap in the Ugandan school system. Working with schools & colleges, The **SIWET Outreach Program** intends to address the issue also from a behavioral science approach trying to find out why some students intentionally miss classes as well as linking real industry challenges with science & engineering curriculum topics. We believe the education outreach can answer this question as students may be interested more in the practical hands-on yet the schools are offering them only theoretical classes.

The program will run on STEM (Science, Technology, Engineering and Mathematics) at higher primary, lower level secondary (S.1-S.3) , colleges and Universities focusing on training students in different STEM career clusters e.g. **welding, fabrication and joining technologies**, understanding their application and impact with a goal of creating thinkers and innovators at an early age. Students start to identify their interests at this age, a stage behavioral psychologists referred to as **Identity Vs Role Confusion. This is when children try to figure out who they are and what they can do.** The program will target both male and female students on a ratio of 4:6 (40% boys, 60% girls).

The program intends to carry out a needs assessment through one-on-one sessions with students to select those students with more passion and interest as well as providing an alternative to dodging students whose problem is grasping theoretical work hence influencing their behavior. The program is not a substitute to other subjects but compliments learners with practical hands-on and will give participating schools both competitive and comparative advantages.

Purpose

The main purpose of the program is to nurture and build a vibrant technological and employable skills base from schools and offset foundational career mistakes, address skills gaps and manage unemployment among youths.

This STEM approach of the program will put emphasis on preparing future generations to be successful innovators and inventors with STEM Education programming. Focusing on children with varied interests, the SIWET Education Outreach seeks to provide opportunities to take traditional learning and pivot it to prioritize the hand-on experience and real world application necessary to develop an innovative mind.

Outputs/Program Results/Impacts

1. Creation of STEM Clubs in each participating school

2. Each STEM Club to invent/innovate and fabricate one prototype machine for their school basing on school needs/gaps or requirements.
3. Establishment of fabrication workshops at participating schools. Students can use the workshops to make fabricated products for the school.
4. Program to support and cement the new curriculum.
5. Bridging the skills gaps among the youths
6. Reduction in absenteeism as a result of lack of interest (using a behavioral science approach).
7. Design & production of marketable sample products by each participating student.

Beneficiaries

The SIWET Education Outreach seeks to address the concerns of the following groups and influence a change in their educational/academic approach;

- **The students:** lower secondary students (S.1-S.3) who have interest in practical hands-on training. Through technological career guidance, these students can be channeled to the right careers at an early age.
- **The parents:** parents usually have a big say on which careers their children take. This will involve mind set change for parents to see this kind of skilling as equally valuable.
- **The schools:** Those schools focused on breeding employable students, innovators and change makers. The program seeks those schools that want to stand out as offering something unique.
- **Educationists/academics:** The program seeks to influence change in their teaching and learning designs.
- **Teachers:** The teachers have a responsibility to point students to the right direction. The program may help them identify and select students better suited for the program.

Main Activities

1. Identification of forward thinking schools
2. Meetings with proprietors/heads of selected schools and parents through PTA meetings
3. Needs Assessment through one-on-one sessions with a number of students.
4. Orientation of selected students to the program
5. Technological Career Guidance
6. Real Training in Welding, Fabrication and Joining Technologies
7. Summer Camps
8. After school programs
9. Makerspaces

Training Team

1. SIWET Welding Institute's Younger Members' Committee
2. Selected STEM Ambassadors
3. SIWET Staff
4. SIWET Volunteers



Signed: Ssezibwa Ronald
Technical Director