

Dr. David Poston's contribution to technology development in Tanzania

– Views of Godwin Kileo



met Dr. David Poston in Mtwara Tanzania in 1991 when he was a Consultant working with Rural Integrated Program Support (RIPS) Phase 1, a program that was funded by FINNIDA. At that time I was a Regional Manager for the Small Industries Development Organization (SIDO an organization that was under the Ministry of Industries and Trade in Tanzania. My duties were to support Small & Medium Enterprises (SMEs) in Mtwara Region through assisting businesses to identify viable opportunities, assist them to prepare their own business plans and give advice on possible sources of funding – through Banks and/or the SIDO hire purchase system. When I met David I realized that he had a lot I could learn from. His ideas were revolutionary to my mind. I will mention a few things that led to my decision to befriend him.

David's criticism of the Tools for Self Reliance Program in Africa, and the opposing idea of tool making in Tanzania

In 1991 Tanzania was host to the Conference on Tools For Self-Reliance in Africa. The meeting in Arusha, Tanzania, was attended by the respected founders of TFSR (Rev. Farther Huddleston and the former President of Tanzania, Mwalimu J. K. Nyerere) and almost all the recipients of TFSR tools from African countries and a few selected SIDO Regional Managers. I was lucky to be one of the selected few. Almost all papers presented in the meeting were singing praise songs for TFSR for "*their good work*" of collecting scrap and worn-out tools from all over England for export to Africa. In contrast to this view a paper prepared by David and Godwin proposed a revolutionary different idea, a sustainable way of dealing with the problem of lack of tools in Africa by promoting local tool production by means of releasing and using the abundant scrap steel that was retained in the railway stations and in the decentralized workshops and godowns of the Ministry of Works, all over Tanzania.

Introduction of Mobile Tools Production Training Program

In the same year 1991, David introduced Mobile Tool Production Training in Lindi and Mtwara regions of Tanzania. Why Lindi and Mtwara? The two regions were cut off from the rest of the country due to poor infrastructure, particularly during rainy seasons. Transportation of industrial farm implements from Dar es Salaam and Mbeya (Farm Implement Production Centres) could not reach Lindi and Mtwara. There were no accessible roads. However the lack of farm implements in Lindi and Mtwara, and the existence of a large population of practicing traditional blacksmiths was an entry-point for David to start organising tool production training. The training-of-trainers course started with a few selected blacksmiths. These new trainers then travelled continuously to provide mobile blacksmith training courses simultaneously throughout Lindi and Mtwara regions. Access to scrap-steel and other capital equipment proved to be a constraint partly because of the lack of working capital and partly because of lack of transport. It was recognised that some of these constraints could be reduced if the government were to consent to release scrap steel from government workshops specifically for tool-making use by blacksmiths. The SIDO Mtwara regional office tried its best to convince the government through the

Regional Commissioner's office but it took many years for the central government to agree to release the scrap.

The Mobile Blacksmith Training Program was the brain child of David Poston. He gave himself to this project and spent a lot of his energy for it to succeed. His book written in 1996, "Under the Mango Tree – Mobile Training for small-scale production of tools and implements in Africa", clearly defined objectives and the roles of trainees, the training team, team leader and project manager within a six-week training and course preparation framework. David Poston was so committed to the project, to the extent that he gave his valuable and precious time even when he was no longer working in Tanzania in the form of advisory support to his successor. This was the secret of the long-term success of a project that in a five year period trained over five hundred traditional blacksmiths in tool-making for a month each, in their own villages. This proven model of training continues to be used in East Africa.



David's skills imparting handshake with a smile (DP and blacksmithing instructor Saidi Magutare-united in Kigoma 2007)

In Mtwara in 1992 Saidi Maguta said that "For the three months training David lived our life, he was one of us. He linked tool production with business and addressed constraints in the project with practical solutions."

Introduction of Non-Monetary Credit Scheme

The success of Tool production was linked to a "Non-monetary Credit Scheme". This was a credit mechanism through which the blacksmith could get access to training and capital equipment without paying cash money. The mechanism whereby blacksmiths could acquire training and raw material in exchange for tools that they had made was known as "Nusu-Nusu" ("Half-Half") Stage 1, and the subsequent extension whereby blacksmiths could acquire capital equipment in exchange for tools was known as "Nusu-Nusu" Stage 2. In addition to developing the de-centralised tool production capacity in the two regions the Mobile Blacksmith Training Program built the management capacity of the project-implementing institutions (in this case Folk Development Colleges in Mtwara and Lindi regions). "Nusu-Nusu" Stage 3 involved the blacksmiths becoming the tool manufacturers and the Folk Development Colleges the provider of working capital. The benefits of the project were fully established by the end of 1999 (which marked the end of the FINNIDA-funded "Rural Integrated Project Support" Phase 2 project.)

Tool Production in Post Primary Schools

Blacksmith Training was extended to Post Primary Schools for the purpose of imparting tool making skills to post primary school teachers, who would then in turn be able to equip their school workshops with the basic tools necessary for training students. Teacher training was provided by a blacksmith instructor seconded to the program from Mtwara Technical College. The teachers would then teach students on how to make their own tools which they would be able to use after graduation to earn their livelihoods.

Intermediate Transport

Tool production was constrained by the difficulties of transporting scrap steel to the forge and then the finished products to markets. Dr David Poston's networking capabilities and knowledge of different technologies made the establishment of the RIPS Intermediate Transport project possible. The main objective of applying the non-motorized transport technologies developed by the UK NGO Intermediate Technology Transport (ITT) was to improve the access of potential users to the means of transporting their goods. The local small-scale commercial manufacture of transport technologies suitable for the local transportation of goods was established with the guidance of the project. The Transport project began by training selected fabricators to produce wheel assembly jigs and wheel making equipment (i.e. benders) to the ITT designs. This project established the sustainable manufacture of extended load-carrying bicycles, bicycle trailers and ambulance trailers.

Access to credit was recognised as a constraint upon the trained fabricators and as a result negotiations were initiated with the Tanzania Postal Bank (TPB) with the aim of drawing a Memorandum of Understanding in which TPB would provide access to credit/working capital to the fabricators and other groups or individuals working in the private sector. The initiative to work with Tanzania Postal Bank did not succeed because of collateral issues. The bank required a guarantor for loan repayment, something that the RIPS Program could not offer.

Nonetheless, the extensive impact of the IT Transport technology caused Mtwara and Lindi to become significantly different from other regions in Tanzania. Extended bicycles and bicycle trailers continue to be made for sale by local small-scale fabrication businesses. Cycle-drawn ambulance trailers have been generally adopted for use by rural dispensaries and clinics in areas where ambulances of any kind had never been heard of and where motorized ones still remain unavailable.

Translation and Publication of Technology Books

In 1997 Poston organised for the RIPS Blacksmith Training Project the translation into Kiswahili of two books, "Basic Blacksmithing" and "The Blacksmith Instructor's Guide". Both were written by David Harries and Bernhard Heer, having originally been commissioned by Poston when he worked for the Intermediate Technology Development Group (now Practical Action). The following year three more books, "How to Make Carpentry Tools" and "How To Make Carpentry Tools –Instructors Guide", both

written by Aaron Moore, and “Under the Mango Tree – Training for Small-Scale Production of Tools and Implements in Africa” by Dr David Poston were also translated into Kiswahili by Dr Alice Chuwa of the University of Dar es Salaam and printed and published by the Ndanda Mission Press. These books were distributed by the RIPS project to all practicing blacksmiths in different regions in Tanzania, Libraries, all Post-Primary Schools and Folk Development Colleges in Tanzania, VETA, NGOs, Intermediate Technology Publication (ITP), Intermediate Technology Kenya (ITK), Intermediate Technology Group (ITDG) UK and to authors and translators. In 2007 the same books were used in Kigoma in a training program supported by UNIDO. These books have been instrumental in the improvement of the skills and knowledge of tools-makers all over Tanzania.

Tools for Self Reliance Conference Arusha Tanzania 1991



The important and unique quality of David Poston is not about his education, nor is it about his ability to perfectly harness different careers as a jeweler and photographer, nor his career as an international development project designer, but is about his approach to meaningful life in general and what the diversity of his skills and knowledge have contributed to development, in creating a meaningful output in the broadest picture.

David is a team worker, a team organizer, a trainer by action and getting his hands dirty and a development project designer by understanding. David would rather sit with project beneficiaries, become one with them and then write the project. David is a networker and a motivated collaborator in development. His approach to addressing constraints upon development projects through pragmatic and practical solutions is unique in its understanding. For example his paper “Constraints to tool

production in Lindi and Mtwara in Tanzania” linked access to raw material with access to non-monetary credit, with access to non-motorised transport and finally with access to market. All joined-up.