

## **The Risk to Achieving Sustainable Development Competencies: A Gendered Analysis of Access and Training Outcomes in TVET Institutions in Kenya**

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### **Abstract**

*Education is pivotal to personal and national development. As per SDG 4, educating males and females positively improves their economic status, and expands future opportunities and choices. These benefits include increased earnings, reduced engagement in crime, delayed marriages for girls and improved life outcomes. In Kenya, access to TVET is gradually increasing, but with persistent gender disparities. The gaps are felt in access, as well as in the competences possessed by male and female students. This paper presents findings of a national study that investigated the production of skills and competences of youth through Kenya's TVET system. The study used the whole youth development lens to examine the extent to which youth in TVET training exhibit technical, academic, cognitive and life skills, as well as values. A total of 182 TVET institutions in 9 counties participated, at all three levels of national polytechnics, technical training institutes and vocational training centres, both public and private. Results revealed stark gender disparities in access, especially in enrolment to given courses and study areas. At the same time, gender gaps are evident in the skills and competencies that the youth accumulate through training, especially in functional literacy, numeracy and digital literacy, almost always in favor of males. The inequalities vary across social-economic backgrounds and student ages, as well as parenting status, especially among female students. This paper concludes that engendering recruitment efforts is necessary in the TVET rebranding efforts, and that training methods, timing and duration require adaptation, if both male and female students are to acquire the expected sustainable development competencies. This paper recommended that the Ministry of Education should embark on various strategies including policy development, provision of scholarships to the females in order to ensure gender parity in TVET. There should be a review of the pedagogical method of training from a male centric approach to a more inclusive and a more gender sensitive one. The study also suggests encouraging and nurturing the female gender at a tender age to embrace the importance of TVET as a pathway to sustainable development.*

**Key words:** *Functional literacy, functional numeracy, digital literacy, pedagogy*

### **Introduction**

Skills development through technical and vocational education and training (TVET) leads to an improved living standard as this provides the graduates with the necessary skills for them to access, create and retain employment. These skills also

help in solving economic, social and environmental problems. These skills also give the youth the ability to enter the world of work, engage in entrepreneurship ventures and make them more resilient in the face of market changes that demand flexibility by this increasing productivity and wages increasing. Skills development has proven to be one of the drivers to the achievement of the sustainable development goals linked to target of the UN sustainable development goals 4 and 8 under the following indicators: 4.3 that by 2030, equal access to TVET and university for all men and women, and 4.5 posits that by 2030 gender based disparities in education should have been eliminated, as well as provision of equal access to TVET for vulnerable populations including children, people living with disabilities and indigenous people. 8.5 states that by 2030 the achievement of full and productive employment for everyone (male and female) - including the youth and people living with disabilities should be realized. Access to quality training and capacity development opportunities empowers women to contribute to the development of their communities. There are still many women who are not able to master the skills and competencies needed to succeed in today's workforce, while the educational qualities in Africa still remains low with persistent inequalities to the access of these skills (FAWE, 2012).

There is need to ensure that each person has a skill that propels them to be able to access, create and retain jobs. This paper puts into perspective the gender disparities that are experienced in education with a focus on the TVET sector. It seeks to provide a deeper understanding through analyses of the national research that was conducted in 2018 by Africa Population and Health Research Centre (APHRC) on skills production amongst in-campus youth aged 15-25 years (Newman & Dusenbury, 2015).

According to UNESCO-UNEVOC (2017), TVET is concerned with the acquisition of knowledge and skills for the world of work. The diverse designates as apprenticeship training, vocational education, technical education, technical and vocational education, professional and vocational education, occupational education and workforce education.

The Dakar Framework for Action (2000), states that all adults have a right to basic education, beginning with literacy, which allows them to engage actively in, and to transform the world in which they live. There are still some 880 million people who cannot read or write in the world; two-thirds are women. The fragile levels of literacy acquired by many new literates compound the problem. Yet the education of adults remains isolated, often at the periphery of national education systems and budgets. Johnsen & Kendrick, (2005) attributed the gender disparity to the bias in the curriculum and the system's failure to offer the necessary support to boost women's confidence and esteem at the budding stages.

### **The Purpose of Study**

The general objective of the study was to investigate the gendered factors affecting access and training outcomes, and the sustainable development competencies in TVET institutions in Kenya.

### **The Specific Objectives**

- i. To find out the extent to which students (by gender) exhibit whole youth development in TVET institutions in Kenya.
- ii. To ascertain the extent to which institutional capacities develop sustainable development competencies in TVET institutions in Kenya.
- iii. To examine the factors that affect access, training outcomes and the sustainable development competencies in TVET institutions in Kenya.

### **Significance of the Study**

This study will be of significance to both policy makers and other researchers. To the policy makers the study will help in making recommendations on various strategies in ensuring equality in access and training outcomes between both genders in TVET in order to improve the sustainable development competencies. The study will also flag the gender disparities that exist in training institutions, and stimulate innovative solutions that will increase enrolment and learning outcomes. Other researchers will use the findings as point of reference in their studies especially when studying on how best to improve the lives of youth to become successful in life and work

### **Literature Review**

According to Klasen (2002), the effect of the gender differences in years of total schooling in the population on per capita income growth is high, and the effect of gender inequality in attaining education account for 0.95 percent of the 2.5 percent in the rate of growth.

Gender parity can be achieved by a strategy called gender mainstreaming. According to ECOSOC in its conclusion of 1997/2, Gender mainstreaming is defined as:

The process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality. Gender mainstreaming entails bringing the perceptions, experience, knowledge and interests of women as well as men to bear on policy-making, planning and decision-making. Mainstreaming should situate gender equality issues at the center of analyses and policy decisions, medium-term plans, programme budgets, and institutional structures and processes. (United Nations, 2002).

The most critical intention of the TVET sector policy is to ensure participation in TVET is inclusive and of quality, so that the disadvantaged population not only access but also complete their study. There are still a lot of challenges undermining the achievement of the parity of gender in education and training (UNESCO & NCST, 2010). Previous assessments show that there has been some progress in the participation of the women in the labor market even though not as steady as is expected. Women's participation is now estimated at around 40 percent of the global labor force, ILO (2002).

Gender integration for parity is still an elusive dream despite the government efforts to achieve it, there are various policy documents both national and international that have been incepted to address this challenge (Government of Kenya, 2009). However, more needs to be done especially in the tertiary education space so as to ensure that both gender acquire skills for work and life.

## **Research Methodology**

According to Creswell (2014) a research design is a set of procedures and methods that are used in the collection and analysis of the measure of variables specified in the research. In this study the research followed the following steps. This study adopted a cross-sectional survey design.

The study was conducted in 9 Kenyan counties; Kisumu, Nairobi, Garissa, Uasin Gishu, Turkana, Meru, Mombasa, Nyeri and Kakamega that were selected based on the presence of a national polytechnic except for Turkana and Garissa that were selected to include the marginalized groups.

The researcher further randomly selected VTCs and TTCs taking into consideration the type of training Centres whether private or public for representation purposes in the nine selected counties.

The study targeted youth aged 15- 25 years at various TVET Centres across Kenya. The study concentrated on the 364 TVET accredited Centres (TVETA, u.d.).

The study consisted of a sample of 3640 students and 364 tutors in 182 institutions. In each institution, 10 learners from the first year and 10 from the final years were randomly selected with consideration of gender and program of study. One female and 1 male tutors were also randomly selected and interviewed.

## **Findings**

### ***Response Rate and Mean Age***

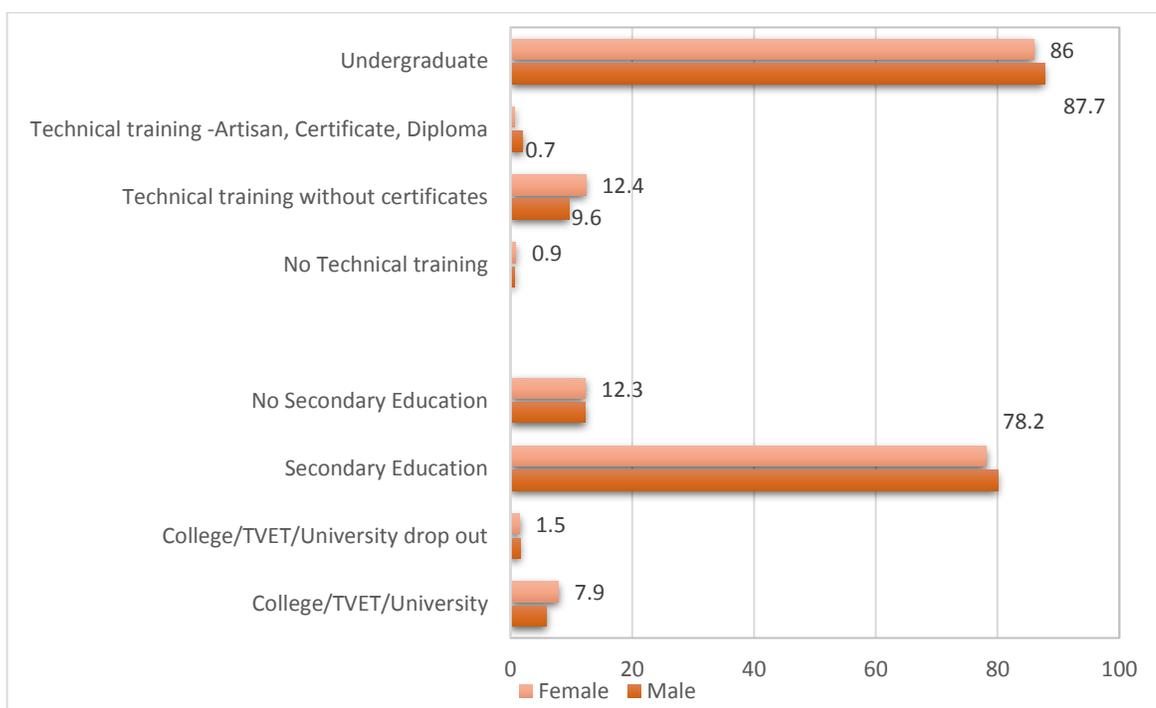
There were 3452 student participants of ages 15-25 years whose data was analyzed as below:

Of the 3452 students interviewed 57.3% were female and 42.7% were male, the mean age of the interviewed respondents was 21.6 years for male and 21.2 years for female

**Students’ Highest Level of Academic Education**

On the academic levels, there was an equal gender representation of those who didn’t have a secondary education at 12.3%. More male learners had secondary education at 80.1% compared to females at 78.2%. For tertiary education, there were more males at 1.6 % against the female at 1.5 %.

On the technical training, more females at 0.9% had no technical training and males at 0.7%, slightly higher rate female at 12.4% had technical skills with no certificates than male at 9.6%. There were fewer females with technical skills either artisan, certificate or diploma at 0.7% as compared to males at 2%, and similarly more male at 87.7 % had undergraduate degrees than their female counterpart at 86%. This was due to the perception of the many challenges that hinder females from acquiring education



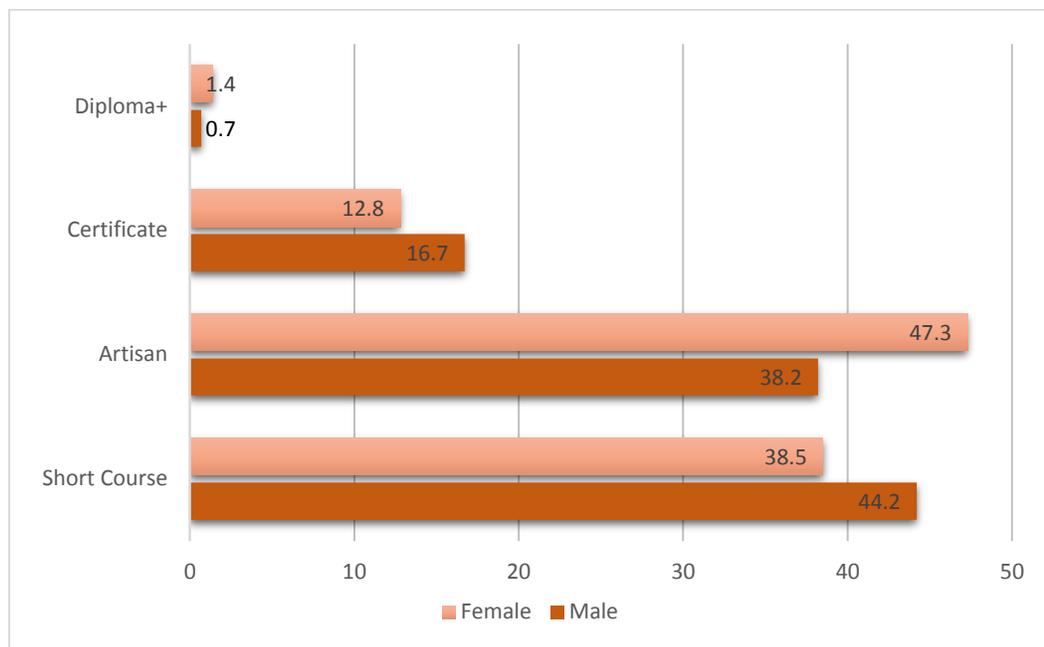
**Figure 1:** Students’ Highest Level of Academic Education

**Students Socio-economic Status**

The study looked at the family background of the students based on a 14 item list. Students were expected to tick the items they either own individually or were communally owned in the family. The study showed that the females had better SES with a mean of 6.5% compared to 6% among males. The family background was not a hindrance to female joining TVET as they are compared as better off than the male counterparts.

**Current Course**

Fewer females were taking certificate courses at 12.8% as compared to the male at 16.7%. There were also fewer women enrolled for short courses at 38.5% compared to the male at 44.2%. However, there were more female students taking diploma and artisan courses as shown below.



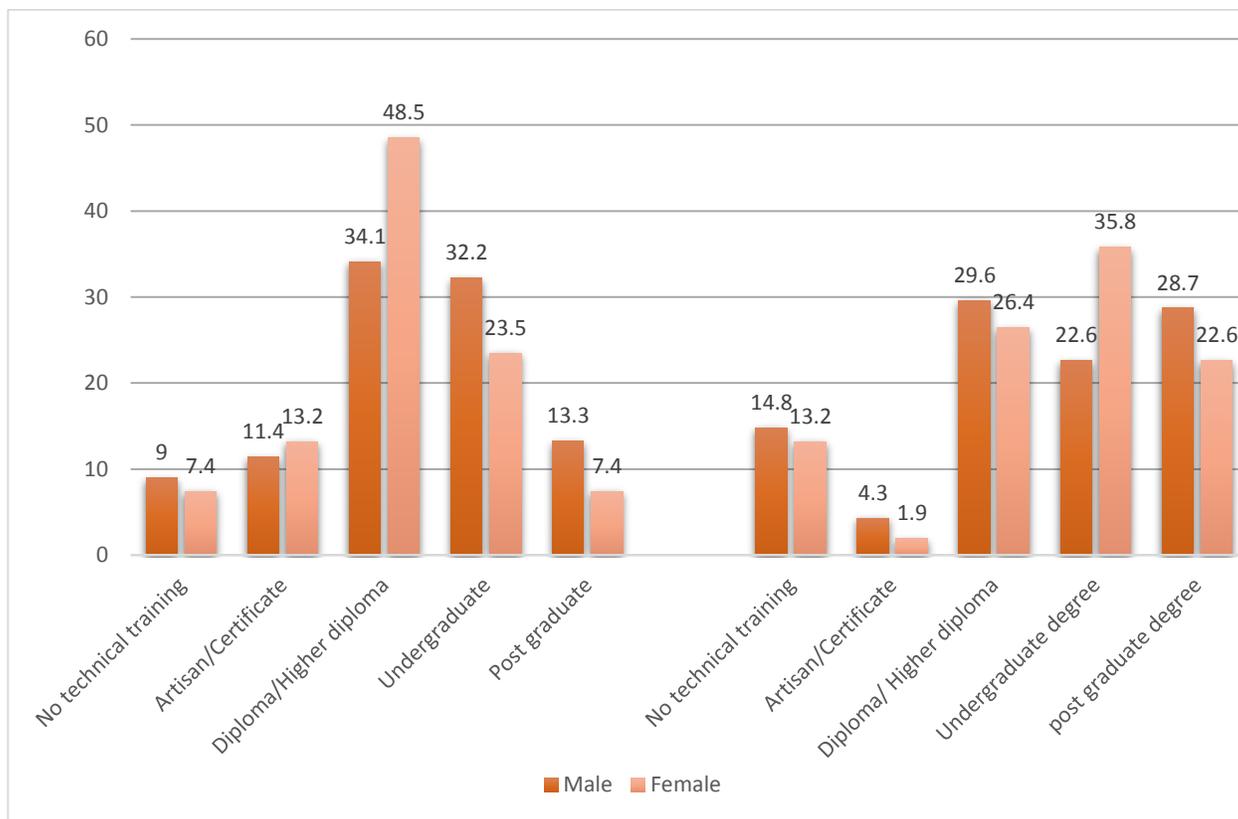
**Figure 2:** Students' Current Course of Study

### ***Trainers' Characteristics***

The study also looked at 345 TVET trainers and the following are the findings

**Trainer response rate.** A rate of 61% of the trainers that took part in the study was male as compared to the female who were 39%. The data showed glaring disparities of the genders of the trainers, considering that the trainers from the sampled schools were all being interviewed

**Highest level of trainers' academic level and technical training.** On academic level, 2.9% of the female trainers did not have secondary school education compared to 0.9% of the males. More females had secondary school education at 4.4%, and college/TVET qualification at 51.5%, but few had university education as compared to the male who had 63.5% respectively.



**Figure 3:** Highest Level of Trainers’ Academic Level and Technical Training

**Refresher course in the last three years.** A rating of 41% of the female trainers had had a refresher course in the last three years as compared to the male at 44%.

***TVET Managers’ Characteristics***

As part of the study, a tutor questionnaire was administered and sought information from tutors about their awareness and perception of soft skills and core values. A total of 168 TVET managers of both gender were included in the study. The results were as follows;

**Gender distribution.** A rating of 32% of the managers who responded were female, resulting in about half of their male counterparts at 68%

**Highest level of managers’ academic education and technical training.** On academics, there were small differences between the genders with female ranking highly on university, at 71.7% compared to male at 71.3%, more female had a College/TVET education compared to male at 26.1% while only 1.9% did not having secondary school education and 26.4% compared to male at 2.6 respectively.

On technical skills, 13.2% female had no technical training, 1.9% had artisan or certificate training, 26.4% had a diploma/ higher diploma, 35.8% had undergraduate degree and 22.6% at postgraduate degree level compared to male with 14.8%, 4.3%, 29.6%, 22.6, and 28.7% respectively

### ***Numeracy, Literacy and Digital Learning***

Students were tested on their performance of the functional literacy, functional numeracy and Digital literacy. The test on functional literacy was to assess the ability to comprehend and decipher a question that had competing information. It was essential that the question focuses on tasks that were given in the workspace. The definition of functional literacy should help one manage daily living independently. The test was to evaluate whether the youth would be able to reason, think and interpret data.

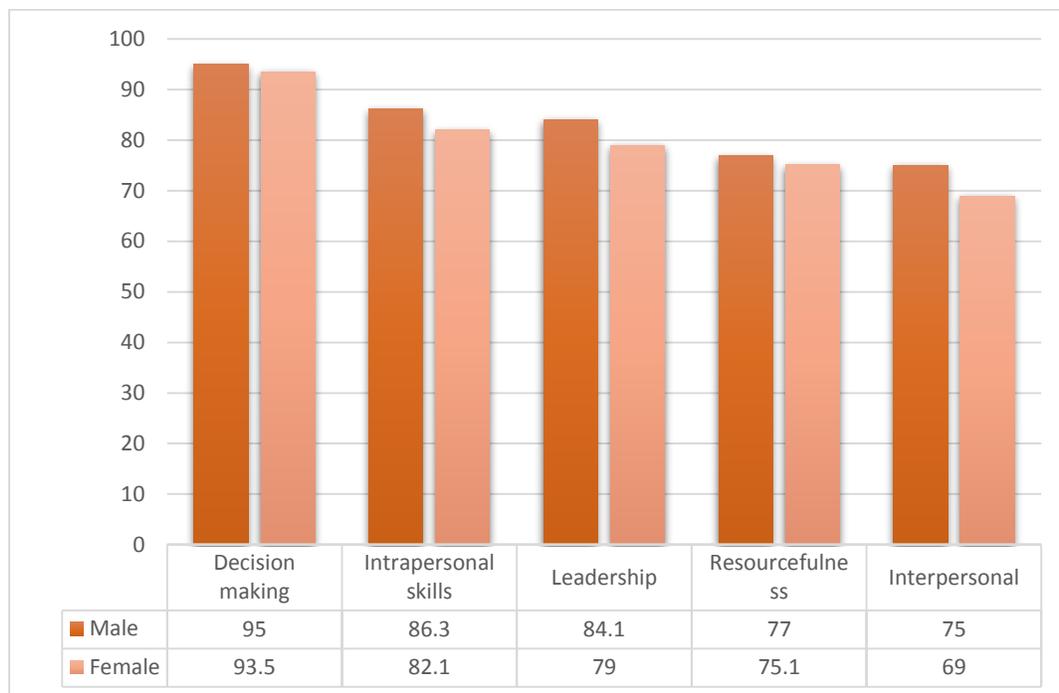
The first questions measured the ability of respondents to process information and solve problems. The second question measured if the youth could project and make decisions based on logical high order thinking and reasoning. On digital literacy they were assessed based on their ability to use a phone.

The female students' performance was lower with 80%, providing correct responses to the literacy questions compared to the male gender at 89%. On Numeracy, there were 42% of female students who got the questions right compared to 49.2% of their male counterparts. On digital numeracy 19% of female students assessed could not perform tasks on the phone as compared to their male counterpart at 28%.

The female learners had poorer performance compared the males, which could be attributed to lack of gender responsive approaches at all levels. Further, gender bias in curriculum, classroom pedagogy and failure of the system of education to offer support for development of self-esteem confidence and aspiration and aspirations of female learners at formative stages as cited by Muthima and Ngugi, (2017), is also apparent in the study.

### ***Socio-Emotional and Life Skills***

The study assessed socio-emotional and life skills using a Likert scale. It established that, the male learners reported better decision-making skills at 95% compared to the females at 93.5%. Males reported better intrapersonal skills at 86.3% compared to female at 82%. Male reported better leadership at 84.1% compared to female at 79%. Male scored higher on resourcefulness at 77% compared to female at 75.1 %, and interpersonal skills at 75% compared to female at 69%.



**Figure 4:** Socio-emotional and Life Skills

The findings were similar to those of the University of Virginia (Ross, Kim, Tolan, & Jennings, 2019) who examined the normative growth trajectories of adolescents’ social and emotional skills. The report indicated that five essential social and emotional skills (self-awareness, self-management, responsible decision making, forming relationships and relationship quality, no two had the same growth pattern. Across all of the social and emotional skills we reviewed, there were differences in the trajectories between males and females while in some cases the difference in gender was drastic.

**Summary of Findings**

There have been various interventions that have been implemented to ensure the gender gap is bridged. In as much as this is being done, the gender gap is not closing up as is expected. There are still more males accessing and completing academic education with a bigger percentage having gone to the postgraduate level. The female-triggered cultural issues have lead to many more dropouts. This aligns with UNESCO’s findings that, in Sub-Saharan Africa, the GPI value of 0.79 for the adult literacy rate indicate that women aged 15 years and older are one-fifth less likely to be literate than men in the same age group (UNESCO, 1983).

Functional literacy and numeracy are important facets in the understanding and conceptualization of major concepts in TVET however the female gender still lags behind. The world is also going digital and most engagements are being done on digital applications; women need to be supported to access education on digital and technological issues.

## **Conclusion**

Skills development is a critical aspect in the realization of the sustainable development goals and in Kenya's 'Big 4' agenda. In as much as this is true the gender difference is glaring with the female lagging behind in certain aspects of technical training. It is important that there is an endeavor to uplift the female to be able to develop in line with the SDG's.

## **Recommendations**

This paper recommended that the Ministry of Education to embark on various strategies including policy development, provision of scholarships for the females in order to ensure gender parity in TVET. There needs to be a review of pedagogical methods of training from a male-centric approach to a more inclusive one that is more gender sensitive. It should also encourage and nurture the female gender at a tender age to embrace the importance of TVET as a pathway to achieving relevant goals in sustainable development agenda.

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