INFLUENCE OF HUMAN RESOURCE CAPACITY FOR MONITORING AND EVALUATION ON UTILIZATION OF INFRASTRUCTURAL FACILITIES BY DISABLED LEARNERS: THE CASE OF NATIONAL POLYTECHNICS, KENYA

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ABSTRACT

The national polytechnics provide Technical, Industrial, Vocational and Entrepreneurship Training (TIVET) education to both able-bodied and disabled learners at certificate, diploma and higher national diploma levels. Even though the institutions have provided necessary infrastructural facilities to enable disabled learners access TVET education, utilization of such facilities remains a subject of interest to policy makers, and one which no empirical study has ever examined. This study was expected to determine the influence of human resource capacity for Monitoring and Evaluation (M&E) on utilization of infrastructural facilities by disabled learners. To achieve this, a cross-sectional survey and causal-comparative designs, with both quantitative and qualitative approaches were adopted. Data were sourced in May 2015 from 2 principals, 282 teaching staff, 32 learners, 4 officers from Ministry of Education, and 2 officers from National Council for Persons Living with Disability. The results show that a significant relationship between human resource capacity for M&E and utilization of infrastructural facilities by disabled learners ($\chi^2 = 7.864$, df = 4 & ρ-value = 0.075). Besides, participants perceiving their capacity in M&E to be 'high' had about 6.4 times the odds of positively influencing utilization of infrastructural facilities by disabled learners as their colleagues perceiving their capacity in M&E to be 'low' (ρ-value = 0.022, β = 1.854, OR = 6.385, C.I. = 2.097-19.439). The results suggest up to 95% chance that improving the capacity of teaching staff in M&E practice is likely to have a positive influence by increasing utilization of infrastructural facilities by disabled learners.

Keywords: Human resource capacity, utilization, infrastructural facilities, disabled learners, national polytechnics.

INTRODUCTION

Kenya has two national polytechnics providing Technical, Industrial, Vocational and Entrepreneurship Training (TIVET) education. Eldoret Polytechnic is situated in Uasin Gishu County, about 335 kilometers northwest of Nairobi, the capital city of Kenya. The institution was established in 1985, with the first batch of students enrolling in 1988. The institution has four campuses and provides technical training Mechanical Engineering, Chemical Engineering, Applied Sciences, Health Sciences, Computing and Information Technology, Electrical and Electronics Engineering, as well as Building and Civil Engineering. Additional courses include Business Studies, Hospitality, Tourism and Consumer Sciences, as well as Entrepreneurship and Human Resource (Eldoret Polytechnic, 2008).

Kisumu Polytechnic was started in 1967 as a technical secondary school. It is situated about 400 kilometers West of Nairobi within the lakeside city of Kisumu. In 1988, the institution was upgraded to a Technical Training Institute; while in 1996, it was elevated it to a national polytechnic. The institution provides TVET training in courses such as Electrical and Electronic Engineering, Mechanical Engineering, Automobile Engineering, Building and Civil Engineering, Computer Studies and Mathematics, Applied Science, Institutional

Management, Business Studies, as well as Entrepreneurship (Kisumu Polytechnic, 2016). In Kenya, TVET education is recognized and supported by the government to equip young people with practical skills that are directly relevant to various industries; thus, improving their employability (Nyerere, 2009).

The two institutions provide opportunity for both able-bodied and disabled learners to access TVET education, at certificate, diploma and higher national diploma levels. The Kenya National Survey of People with Disability (KNSPWD) Report indicated the distribution of disabled learners in the education system, where about 69% were in primary schools, 29% were at the secondary school tier, while 4% were pursuing higher education in tertiary institutions, including the national polytechnics (National Coordinating Agency for Population and Development [NCAPD], 2008). Although the KNSPWD report did not capture the number of disabled learners in the national polytechnics, data from the Ministry of Education [MoE] indicate that by the end of 2013, 122 disabled learners were enrolled in the two institutions (MoE, 2014).

Creating opportunity for disabled learners to access TVET education is a key provision of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), a universal framework reaffirming that all persons with any type of disability are entitled to all human rights and fundamental freedoms (United Nations [UN], 2006; United Nations Education Scientific and Cultural Organisation [UNESCO], 2013). Article 24 of the Convention notes that providing assistive facilities, is at the centre of expanding access to education for learners with disabilities. In this regard, Party States are urged to ensure that necessary facilities are constructed, installed or provided on a needs-basis in educational institutions to facilitate mobility, participation as well as curriculum implementation processes (UNESCO, 2013).

In Kenya, the Convention is domesticated through Section 18 (1-3) of the Disability Act 2012, which is read together with Article 54(1)(b) of the Kenya Constitution 2010. Nonetheless, in many developing countries, disabled learners continue to face numerous challenges in accessing education, not only in terms of physical access to facilities, but also in relation to curriculum, teaching, learning and assessment (UNESCO, 2013). In Kenya, the although national polytechnics have provided necessary infrastructural facilities to enable disabled learners participate access TVET education, utilization of such facilities remains a subject of interest to policy makers.

Monitoring and Evaluation (M&E) systems in educational institutions provide information on key program indicators, which authorities use to support interventions aimed at improving access, quality and equity (Psacharopoulos, 1994; Vos, 2006). In the context of disabled learners, M&E systems generate information on indicators related to appropriateness, adequacy, functionality and safety of infrastructural facilities to enable decision-makers initiate appropriate measures for improving utilization by disabled learners (Brandjes, 2002; UNESCO, 2013). Optimal utilization of the facilities by disabled learners is likely to improve participation in learning and extra-curricular activities; as well as make educational institutions more accommodative and facilitative. This may be achieved where M&E systems are able to generate information to guide investment and management decisions at the institutional and Ministry of Education levels (World Bank, 2004; UNESCO, 2013).

Nevertheless, educational M&E systems in developing countries are constrained by various issues, among them being inadequate human resource capacity for M&E (UNESCO, 2007;

2013). A review of existing literature suggests that utilization of infrastructural facilities by disabled learners may have a relationship with various components of M&E systems, including human resource capacity. However, the literature reveals a gap in terms of peer-reviewed academic studies directly linking human resource capacity for M&E with utilization of infrastructural facilities by learners with disabilities, particularly in the Kenyan education system. This study was expected to fill up the gap by assessing and determining the influence of human resource capacity for M&E on utilization of infrastructural facilities by learners with disabilities in the two national polytechnics.

LITERATURE REVIEW

Effective M&E systems require sufficient personnel with technical capacity in developing comprehensive and credible M&E systems for gathering, processing, analyzing, reporting, validating and disseminating, as well as utilizing and storing information (World Bank, 2004; Lahey, 2005; Mackay, 2007; UNDP, 2009). Besides, M&E personnel should be skilled in identifying best practices, capacity development needs of line staff and stakeholders; as well as assessing the relevance of M&E frameworks regularly, based on changing priorities and contexts (UNDP, 2009). In addition, effective M&E systems require appropriate policies and standards, which clarify roles, expectations, responsibilities and accountabilities of M&E personnel (Lahey, 2005).

In the context of educational institutions serving disabled learners, having sufficient M&E personnel is important for accurate information that would amplify the need for appropriate interventions aimed at creating a supportive environment for consistent utilization of infrastructural facilities (UNDP, 2009). It is equally important for M&E personnel to have skills in special needs education, in order to understand the needs of disabled learners. In this regard, UNESCO (2009) emphasizes the need for M&E systems to be adapted to program priorities, including the needs of targeted beneficiaries. Lack of special needs education staff trained in M&E or M&E staff trained in special needs education is a key factor undermining the effectiveness of M&E systems in educational institutions and may have implications on the utilization of infrastructural facilities by disabled learners (UNESCO, 2009). In the same vein, Mutisya (2012) emphasizes the importance of the educational institutions to have M&E officers trained on the needs of learners with various forms of disability, as well as instructors trained in M&E.

The need for M&E skills in educational programs is particularly important in developing economies, which are characterized by rapid escalation of enrolment and low institutional capacity in terms of human resource adequacy (World Bank, 2004). Studies conducted in South Africa, Nigeria and Kenya have found that increasing enrolment against an inadequate human resource affects participation of disabled learners in learning and extra-curricular activities. More specifically, escalating enrolment may have a direct effect on per capita workload for instructors; thus, affecting their morale and time required for personalized attention to disabled learners (Horsolman, 2002; Mwiria, Ng'ethe, Ngome, Ouma-Odero, Wawire & Wesonga, 2007). Similarly, Lahey (2005) asserts that due to heavy workload, instructors tend to focus on resolving most immediate activities and fail to think strategically.

In Kenya, the National TVET Policy attributes understaffing or staff imbalances to inadequate adherence to staff deployment norms, as well as high turnover of skilled staff due to lack of motivation, prolonged stagnation and lack of enthusiasm (GoK, 2012b). However, Mutisya (2012) associates staff capacity challenges in educational M&E systems with

funding constraints, lack of clear human resource capacity development plans; as well as the Governments' slow pace in responding to staffing needs of inclusive institutions. Similarly, UNICEF (2009) notes that in developing countries, many institutions that have integrated disabled learners, lack programs for staff capacity development in M&E. However, where such programs exist, their implementation is constrained by under-funding.

The relationship between human resource capacity for M&E and utilization of infrastructural facilities by disabled learners has been explored in very few countries. For instance, in the United States, Thomas and Patricia (2004) conducted experimental studies on 120 disabled learners from three technical institutions and two universities. The study reported that 45.7% of those who had no properly trained personnel in their area of disability were not attending to their studies regularly. Similarly, experiments by Leyser, Vogel, Wayland, Brulle, Sharoni and Vogel (2000) in the UK on 19 disabled learners over a period of 12 months indicated that access to education by learners with paralysis improved with the addition of staff and facilities.

In Indonesia, Steff, Mudzakir and Andayani (2010) using the life history approach, assessed 30 disabled learners from seven public universities and reported that even though the Government had passed a regulation that prioritized improvement of learner to lecturer ratio, most institutions of higher learning were yet to comply with the requirement. More specifically, of the seven institutions involved in the study, only two had employed about one-third of the expected staffing. A study conducted by Sharma (2012) focusing on higher education in India found out that 44% of the universities involved in the study experienced serious shortage of relevant staff for learners with various forms of disability. Only 20% affirmed that they were able to provide skilled staff for learners with all forms of disability.

A study conducted in Uganda by Kajumbula (2011) study reported that shortage of staff with relevant skills is one of the key factors that undermined services provided to disabled learners in Makerere and Kyambogo universities. In this regard, disabled learners were assisted by their able-bodied colleagues, albeit with no training in special education. The situation affected consistent utilization of infrastructural facilities, particularly when changing from one lecture hall to another. The study further observed that in Makerere, 78.4% of the disabled learners were unable to utilize available assistive mobility devices due to congestion and competition from their able-bodied peers. In Kyambogo University, 82.1% of the disabled learners reported the same.

Lack of personnel with technical competencies in M&E is a common feature in Kenyan educational institutions and the Ministry of Education (Mutisya, 2012). This state of affairs has negative implications on the accountability and quality of support provided to disabled learners, as well as maintenance, functionality and utilization of infrastructural facilities. Consequently, data sourcing, processing and reporting to the Ministry is often undertaken by institutional management, albeit with a high risk of deliberate exaggeration or skewing of information to cover-up weaknesses or advance a particular course (Lahey, 2005). The literature review reveals a gap in terms of empirical studies that explicitly determined the relationship between human resource capacity for M&E and utilization of infrastructural facilities by disabled learners.

METHODOLOGY

The study was founded on the mixed methods paradigm, which combines quantitative and qualitative research methods in a study to understand a research problem better. Each of the methods has its philosophical basis, including a patterned set of assumptions concerning reality, knowledge of that reality, and particular ways of knowing that reality (Sale, Lohfeld & Brazil, 2002). The study adopted the descriptive cross-sectional survey and causal-comparative research designs. Whereas the cross-sectional survey design captured data for descriptive purpose, the causal-comparative design enabled the investigators to determine the causal relationship between human resource capacity for M&E and utilization of infrastructural facilities by disabled learners.

The study targeted a population of 322 respondents, including 32 learners (16 disabled and 16 able-bodied), 2 principals, 23 departmental heads, 259 lecturers, 4 officers at the Ministry of Education (MoE), and 2 officers from National Council for People Living with Disability (NCPLWD). A census method was applied to select departmental heads and lecturers; while purposive sampling technique was used to select principals, NCPLWD officers, MoE officers, as well as disabled and able-bodied learners for Focus Group Discussions (FGDs). The sampling process also ensured equal participation of male and female learners. Furthermore, four sets of instruments, including a survey questionnaire, a Key Informant Interview (KII) guide, an FGD guide, an observation check list, and a document analysis guide. The application of multiple instruments was important for triangulation of data and elimination of potential interviewer biases (Jaeger, 1984). The instruments were pre-tested at the Rift Valley Technical Training Institute (RVTTI) in Eldoret to check on their accuracy and applicability. Necessary adjustments such as re-statement of unclear questions and instructions; omission of irrelevant questions and grammatical errors were effected based on results, comments from respondents and new insights.

Primary data were collected with the support of eight research assistants, two of whom were experts in sign language and Braille reading. Data was collected in May 2015. In this regard, 311 questionnaires were issued out to participants, including 57 departmental heads and 254 lecturers. At the end of data collection process, 282 questionnaires were successfully completed and returned, which represents 90.7% questionnaire return rate. Notably though, the return rate seemed to be higher among lecturers (93.7%) than among departmental heads (77.2%), particularly due to the latter's commitment with official duties. Both quantitative and qualitative approaches were applied to process, analyze, and interpret the data. Quantitative data processing involved coding close-ended data, entry, cleaning, transformation, analysis, and interpretation. The Statistical Package for Social Sciences (SPSS) program was used to perform descriptive and inferential analyses. Whereas the descriptive analysis generated frequency distributions and percentages, inferential analysis yielded cross-tabulations with Chi-square (χ^2) statistic, and odds ratios from binary logistic regression. The model was expressed as:

$$Logit[\theta(Y)] = log\left[\frac{\theta(Y)}{1-\theta(Y)}\right] = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \ldots . + \beta_i X_i + \varepsilon_i$$

Such that Y = the predicted variable (utilization of infrastructural facilities by disabled learners); $\theta(Y)$ = the probability that a particular disabled learner was consistent in utilizing infrastructural facilities; $1- \theta(Y)$ = the probability that a particular disabled learner was inconsistent in utilizing infrastructural facilities; α = constant term of the equation; $\beta_1, \beta_2 \ldots \beta_i$ =

regression co-efficients associated with independent variables; X_1, X_2...X_i = independent variables and ε = the error term (Aldrich & Nelson, 1984; Wuensch, 2006).

In addition, qualitative data were processed and analyzed following three steps, as recommended by Best and Khan (2004). In the first step, the data was organized and summarized in line with objectives of the study. The second step involved description of the summary sheets to produce a preliminary report. The third step involved systematic analysis and interpretation of the preliminary report, which was integrated with quantitative data in the final report. The study sought informed consent from participants before being engaged through questionnaires, KIIs and FGDs. In this regard, respondents were briefed about the study and its purpose; and that their participation was purely on voluntary terms. They were also notified about their right to withdraw consent at any time without any penalty. Participants were assured about confidentiality of the information and opinions provided to the investigators; thus, no personal identifiers were documented. Ethical clearance for the study was obtained from the University of Nairobi Ethics and Research Committee; while a research permit was obtained from the National Commission for Science and Technology (NACOSTI).

RESULTS

The study focused on the utilization of five types of infrastructural facilities, namely: *classrooms*, *libraries*, *social halls*, *playgrounds*, and *dining halls*. Perceptions about the frequency of utilization for each of facility were aggregated to form the dependent variable - utilization of infrastructural facilities by disabled learners. The computed results were measured on a three-point scale, where the aggregate value '5' was re-coded as 'not sure' about the extent to which disabled learners utilized all the five facilities; values '6 to 17' were re-coded as 'inconsistent utilization'; while values '18 to 25' were re-coded as 'consistent utilization'.

The results show that of the 282 participants, 81 (28.7%), including 54 (36.2%) in Eldoret and 27 (20.3%) in Kisumu Polytechnics, believed that disabled learners were 'consistent' in utilizing infrastructural facilities. Contrastingly, 175 (62.1%) participants believed that the learners were 'inconsistent' in utilizing the facilities. This group included 87 (58.4%) participants in Eldoret and 88 (66.2%) in Kisumu Polytechnics. In addition, 26 (9.2%) participants were 'not sure' whether disabled learners were 'consistent' or 'inconsistent' in utilizing the facilities. Based on this, the analysis obtained a computed χ^2 value of 11.983, with 2 degrees of freedom and a ρ-value of 0.003, suggesting up to 99% chance that perceptions about utilization of infrastructural facilities by disabled learners varied significantly between the two institutions.

Participants' Socio-Demographic Profile and Utilization of Infrastructural Facilities

The results presented in Table 1 show that participants included 167 (59.2%) men and 115 (40.8%) women. Besides, 69.1% of those who believed that disabled learners were 'consistent' in utilizing infrastructural facilities were men. Similarly, more men (56.6%) than women (43.4%) indicated that disabled learners were 'inconsistent' users of the facilities. The analysis revealed a significant relationship between gender and utilization of infrastructural facilities (χ^2 = 5.644, df = 2 & ρ-value = 0.059). The results imply up to 90% chance that male and female participants were significantly different in terms of perceptions about utilization of infrastructural facilities by disabled learners.

Table 1: Participants' socio-demographic profile and utilization of facilities

Attributes	Consistent		Inconsistent		Not Sure		Total	
	Freq	*%*	*Freq*	*%*	*Freq*	*%*	*Freq*	*%*
Gender								
Male	56	69.1	99	56.6	12	46.2	167	59.2
Female	25	30.9	76	43.4	14	53.8	115	40.8
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
Age								
<26 years	12	14.8	29	16.6	4	15.4	45	16.0
26-35 years	21	25.9	53	30.3	12	46.2	86	30.5
36-45 years	29	35.8	62	35.4	5	19.2	96	34.0
46 years +	19	23.5	31	17.7	5	19.2	55	19.5
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
Education level								
Diploma	6	7.4	12	6.9	3	11.5	21	7.4
Higher national diploma	5	6.2	13	7.4	5	19.2	23	8.2
Bachelors	33	40.7	70	40.0	14	53.8	117	41.5
Postgraduate diploma	16	19.8	38	21.7	1	3.8	55	19.5
Masters	21	25.9	40	22.9	3	11.5	64	22.7
Doctorate	0	0.0	2	1.1	0	0.0	2	0.7
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
Position in the institution								
Lecturer	68	84.0	146	83.4	24	92.3	238	84.4
Departmental head	13	16.0	29	16.6	2	7.7	44	15.6
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
Professional experience								
<6 years	29	35.8	66	37.7	12	46.2	107	37.9
6 to 10 years	19	23.5	36	20.6	10	38.5	65	23.0
11 to 15 years	15	18.5	35	20.0	1	3.8	51	18.1
16 years+	18	22.2	38	21.7	3	11.5	59	20.9
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**

The results show that 96 (34.0%) participants were aged 36 to 45 years, while 86 (30.6%) were in the 26 to 35 years age bracket. Cumulatively, 182 (64.5%) participants were aged between 26 and 45 years, 55 (19.5%) were aged 46 years or higher, while 45 (16.0%) reported ages below 26 years. However, there was no significant relationship between age distribution and perceptions about utilization of infrastructural facilities by disabled learners. The results in Table 1 further show that most participants, 117 (41.5%) had attained bachelor's degrees, 64 (22.7%) reported masters degrees, while 55 (19.5%) were postgraduate diploma holders. Notably, individuals with bachelor's degrees dominated among those who reported that disabled learners were 'consistent' in utilizing infrastructural facilities, 33 (40.7%). The same situation is noted among those who reported 'inconsistent' use of infrastructural facilities and among those who were 'not sure'. However, there was no significant relationship between perceptions about utilization of infrastructural facilities by disabled learners and participants' education level.

The results presented in Table 1 show that 238 (84.4%) participants were lecturers, while 44 (15.6%) were departmental heads. Notably, lecturers dominated in all the three categories of perceptions on utilization of infrastructural facilities. However, the analysis revealed no significant relationship between perceptions on utilization of infrastructural facilities and participants' positions. Table 1 further shows that 107 (37.9%) participants reported a professional experience of less than 6 years, 65 (23.1%) reported 6 to 10 years, while 59 (20.9%) indicated experience of 16 years or higher. The analysis revealed no significant relationship between perceptions on utilization of infrastructural facilities and the participants' level of professional experience.

Human Resource Capacity for M&E and Utilization of Infrastructural Facilities

The study examined the relationship between various indicators of human resource capacity for M&E and utilization of infrastructural facilities by disabled learners. The indicators

included access to training on M&E of disability programs, participation in M&E activities, level of experience in M&E practices, as well as frequency of reading M&E resource materials. Details are presented in the following sub-sections.

Access to training in M&E of disability programs

Participants were requested to indicate if they had ever accessed training on M&E of programs promoting access and participation of disabled learners in educational institutions. The results presented in Table 2 show that of the 282 participants, 101 (35.8%) had accessed some training, the majority, 181 (64.2%), had not. The analysis revealed a significant association between access to training on M&E of disability programs and utilization of infrastructural facilities by disabled learners ($\chi^2 = 9.336$, df = 2 & ρ-value = 0.009). Similarly, key informants revealed that most teaching staff were not competent in applying M&E skills to manage utilization of infrastructural facilities and so were most non-teaching staff. Participants noted that this affected consistent utilization of infrastructural facilities by disabled learners. The main factors that contributed to the challenge included financial constraint and the costly nature of special education, which prevented the Government from employing more staff with appropriate skills.

Table 2: Access to training in M&E of disability programs

Access to training	Consistent		Inconsistent		Not sure		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Ever accessed training?								
Yes	40	49.4	52	29.7	9	34.6	101	35.8
No	41	50.6	123	70.3	17	65.4	181	64.2
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
How many times?								
Once	16	53.3	37	59.7	8	88.9	61	60.4
Twice	6	20.0	11	17.7	1	11.1	18	17.8
>Twice	8	26.7	14	22.6	0	0.0	22	21.8
Total	**30**	**100.0**	**62**	**100.0**	**9**	**100.0**	**101**	**100.0**

The results further show that 61 (60.4%) participants had accessed training once, 18 (17.8%) participants reported to have accessed training twice, while 22 (21.8%) mentioned more than twice. However, the analysis revealed lack of a significant relationship between frequency of training in M&E of disability programs and utilization of infrastructural facilities by disabled learners. In addition, key informants revealed that teaching staff accessed training through periodical internal seminars organized by disability-mainstreaming committees, and occasional training workshops organized by the Ministry of Education (MoE), in collaboration with NCPLWD. However, the opportunities were constrained by inconsistency due to inadequate budgets and a limited number of people trained at any given session.

Participation in M&E activities

The study sought to establish how often participants took part in various M&E activities, considered relevant in promoting the utilization of infrastructural facilities by disabled learners. The first activity examined by the study was *creating awareness about the right to education for all*. The results, which are presented in Table 3, show that of the 282 respondents, 7 (2.5%) participated in the activity 'very frequently', while 40 (14.2%) did so 'frequently'. Those who had 'never' participated in the activity were 94 (33.3%). The second activity was about participation in *M&E of programs for disabled learners.* The results show that out of 282 participants, 4 (1.4%) participated in the activity 'very frequently', while 22

(7.8%) did so 'frequently'. Contrastingly, 119 (42.2%) participants 'never' participated in the activity.

Table 3: Participation in M&E activities and utilization of infrastructural facilities

Participation in various M&E activities	Consistent		Inconsistent		Not Sure		Total	
	Freq	*%*	*Freq*	*%*	*Freq*	*%*	*Freq*	*%*
Awareness of right to education for all								
Never	27	33.3	61	34.9	6	23.1	94	33.3
Not sure	7	8.6	22	12.5	14	53.9	43	15.2
Occasionally	30	37.0	63	36.0	5	19.2	98	34.8
Frequently	14	17.4	25	14.3	1	3.8	40	14.2
Very frequently	3	3.7	4	2.3	0	0.0	7	2.5
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
M&E of programs for disabled learners								
Never	37	45.7	75	42.9	7	26.9	119	42.2
Not sure	10	12.3	28	16.0	15	57.7	53	18.8
Occasionally	23	28.4	57	32.6	4	15.4	84	29.8
Frequently	9	11.1	13	7.4	0	0.0	22	7.8
Very frequently	2	2.5	2	1.1	0	0.0	4	1.4
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
Monitoring of infrastructural facilities for learners with disability								
Never	38	46.9	78	44.5	8	30.8	124	44.0
Not sure	5	6.3	22	12.7	11	42.3	38	13.5
Occasionally	27	33.3	58	33.1	6	23.1	91	32.3
Frequently	10	12.3	16	9.1	1	3.8	27	9.5
Very frequently	1	1.2	1	0.6	0	0.0	2	0.7
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
Utilization of M&E results								
Never	39	48.1	85	48.6	10	38.5	134	47.4
Not sure	7	8.6	24	13.7	11	42.3	42	14.8
Occasionally	24	29.6	56	32.0	4	15.4	84	29.7
Frequently	11	13.7	9	5.1	1	3.8	21	7.4
Very frequently	0	0.0	1	0.6	0	0.0	1	0.7
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
Decision making								
Never	37	45.7	77	44.0	8	30.8	122	43.3
Not sure	7	8.6	27	15.4	10	38.5	44	15.6
Occasionally	27	33.3	56	32.1	7	26.9	90	31.9
Frequently	10	12.4	6	3.4	0	0.0	16	5.7
Very frequently	0	0.0	9	5.1	1	3.8	10	3.5
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**

The third activity was about participation in the *monitoring of infrastructural facilities for disabled learners.* The results show that 27 (9.5%) people participated in such activities 'frequently', while 2 (0.7%) indicated 'very frequent' participation. Those who 'never' participated in the activity were 124 (44.0%). The fourth activity was about *utilization of M&E results*, and the results show that of the 282 participants, 21 (7.4%) participated in the activity 'frequently', while 134 (47.4%) participants 'never' participated in such activity. Regarding M&E *decision making*, the results in Table 3 show that 10 (3.5%) respondents participated in the activity 'very frequently', 16 (5.7%) did so 'frequently'; while 122 (43.3%) 'never' participated.

The analysis revealed that utilization of infrastructural facilities by disabled learners significantly associated with participants' involvement in *creating awareness of right to education for all* (χ^2 = 35.157, df = 8 & ρ-value = 0.000); as well as *M&E of programs for disabled learners* (χ^2 = 31.748, df = 8 & ρ-value = 0.000). More still, there was a significant relationship between utilization of the facilities and *monitoring of infrastructural facilities for disabled learners* (χ^2 = 23.428, df = 8 & ρ-value = 0.003); *utilization of M&E results* (χ^2 = 24.407, df = 8 & ρ-value = 0.002) and *decision making* (χ^2 = 26.072, df = 8 & ρ-value = 0.001). The findings emphasize the need to encourage participation of teaching staff in various M&E activities for continuous learning and responsiveness to the needs of disabled learners.

Level of experience in M&E practices

The study examined participants' level of experience in various M&E practices, the first one being the *design of M&E tools*. In this regard, the results in Table 4 show that 9 (3.2%) participants rated their experience as 'very high'. Those who described their experience as 'high' were 26 (9.2%), while 76 (27.0%) stated 'very low'. The second type of M&E practice was *collection of M&E data.* The results indicate that 12 (4.3%) participants described their experience as 'very high', 19 (6.7%) rated their experience as 'high', while 75 (26.6%) indicated a 'very low' level of experience. The third type of M&E practice was *reporting of M&E results;* in which case, 9 (3.2%) participants described their experience as 'very high', 23 (8.1%) indicated 'high', while 76 (27.0%) rated their experience as 'very low'.

Table 4: Perceived level of experience in M&E practice

Level of experience in M&E practice	Consistent		Inconsistent		Not Sure		Total	
	Freq	*%*	*Freq*	*%*	*Freq*	*%*	*Freq*	*%*
Design of M&E tools								
Very low	17	21.0	50	28.6	9	34.6	76	27.0
Low	30	37.0	45	25.7	8	30.8	83	29.4
Average	19	23.5	60	34.3	9	34.6	88	31.2
High	12	14.8	14	8.0	0	0.0	26	9.2
Very high	3	3.7	6	3.4	0	0.0	9	3.2
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
Collection of M&E data								
Very low	19	23.5	48	27.4	8	30.8	75	26.6
Low	26	32.2	57	32.6	13	50.0	96	34.0
Average	21	25.9	55	31.4	4	15.4	80	28.4
High	11	13.6	7	4.0	1	3.8	19	6.7
Very high	4	4.8	8	4.6	0	0.0	12	4.3
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
Reporting of M&E results								
Very low	13	16.0	52	29.7	11	42.3	76	27.0
Low	33	40.7	44	25.2	10	38.5	87	30.8
Average	20	24.8	63	36.0	4	15.4	87	30.9
High	13	16.0	9	5.1	1	3.8	23	8.1
Very high	2	2.5	7	4.0	0	0.0	9	3.2
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
Utilization of M&E results								
Very low	14	17.3	58	33.1	15	57.7	87	30.9
Low	33	40.7	48	27.4	8	30.8	89	31.6
Average	21	25.9	54	30.9	3	11.5	78	27.6
High	11	13.6	10	5.7	0	0.0	21	7.4
Very high	2	2.5	5	2.9	0	0.0	7	2.5
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
Dissemination of M&E results								
Very low	15	18.6	54	30.9	10	38.5	79	28.0
Low	30	37.1	57	32.6	12	46.2	99	35.1
Average	21	25.9	45	25.7	1	3.8	67	23.8
High	11	13.7	13	7.4	3	11.5	27	9.6
Very high	4	4.7	6	3.4	0	0.0	10	3.5
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**

The fourth type of M&E practice was *utilization of M&E results*, for which 7 (2.5%) participants described their experience level as 'very high'. Those who rated their experience as 'high' were 21 (7.4%), while those who stated a 'very low' level of experience were 87 (30.9%). The fifth type of M&E practice was *dissemination of M&E results*. In this regard, 10 (3.5%) participants described their experience level as 'very high', while 27 (9.6%) said it was 'high', while 79 (28.0%) participants described their level of experience as 'very low'. The analysis revealed a significant relationship between utilization of infrastructural facilities and participant's level of experience in M&E practices such as *collection of M&E data* (χ^2 = 16.559, df = 8 & ρ-value = 0.085); *reporting of M&E results* (χ^2 = 25.812, df = 8 & ρ-value = 0.001); and *utilization of M&E results* (χ^2 = 24.973, df = 8 & ρ-value = 0.002). Utilization of the facilities by disabled learners also significantly associated with *dissemination of M&E*

results (χ^2 = 15.929, df = 8 & ρ-value = 0.012). The results emphasize the need for teaching staff to participate in various M&E practices in order to gain necessary experience, which could improve their responsiveness to the needs of disabled learners.

Frequency of reading M&E resource materials

The study examined the frequency with which participants read M&E resource materials, including project proposals, plans, matrices, methods and tools, as well as reports. Regarding *M&E project proposals*, the results in Table 5 show that 7 (2.5%) participants read such materials 'always', 26 (9.2%) did so 'often', while 122 (43.3%) 'never' read such materials.

Table 5: Frequency of reading M&E resource materials

Reads M&E Resource Materials	Consistent		Inconsistent		Not Sure		Total	
	Freq	*%*	*Freq*	*%*	*Freq*	*%*	*Freq*	*%*
M&E project proposals								
Never	27	33.3	79	45.1	16	61.6	122	43.3
Rarely	24	29.6	42	24.0	8	30.8	74	26.2
Occasionally	17	21.1	35	20.0	1	3.8	53	18.8
Often	12	14.8	14	8.0	0	0.0	26	9.2
Always	1	1.2	5	2.9	1	3.8	7	2.5
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
M&E work plans								
Never	26	32.1	90	51.4	16	61.5	132	46.8
Rarely	26	32.1	39	22.3	8	30.8	73	25.9
Occasionally	18	22.2	31	17.8	2	7.7	51	18.1
Often	11	13.6	9	5.1	0	0.0	20	7.1
Always	0	0.0	6	3.4	0	0.0	6	2.1
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
M&E matrices								
Never	29	35.8	93	53.1	17	65.4	139	49.2
Rarely	22	27.2	34	19.4	8	30.8	64	22.7
Occasionally	17	21.0	33	18.9	1	3.8	51	18.1
Often	12	14.8	11	6.3	0	0.0	23	8.2
Always	1	1.2	4	2.3	0	0.0	5	1.8
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
M&E methods and tools								
Never	30	37.1	83	47.4	19	73.1	132	46.9
Rarely	19	23.1	40	22.9	6	23.1	65	23.0
Occasionally	16	19.8	36	20.6	1	3.8	53	18.8
Often	14	17.4	10	5.7	0	0.0	24	8.5
Always	2	2.6	6	3.4	0	0.0	8	2.8
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**
M&E reports								
Never	25	30.9	81	46.3	17	65.4	123	43.6
Rarely	27	33.3	33	18.9	9	34.6	69	24.5
Occasionally	16	19.8	47	26.8	0	0.0	63	22.3
Often	13	16.0	11	6.3	0	0.0	24	8.5
Always	0	0.0	3	1.7	0	0.0	3	1.1
Total	**81**	**100.0**	**175**	**100.0**	**26**	**100.0**	**282**	**100.0**

The results show that 6 (2.1%) participants read *M&E work plans* 'always', 20 (7.1%) did so 'often', while 132 (46.8%) 'never' read such materials. The results further show that 5 (1.8%) participants read *M&E matrices* 'always', while 23 (8.2%) did so 'often'. However, 139 (49.2%) participants 'never' read such materials. Regarding *M&E methods and tools*, of the 282 participants, 8 (2.8%) read such materials 'always', 24 (8.5%) read the materials 'often'. Those who 'never' read such materials were 132 (46.9%). Lastly, the study examined the frequency with which participants read *M&E reports*. In this regard, the results show that only 3 (1.1%) participants read such materials 'always', while 24 (8.5%) did so 'often'. However, up to 123 (43.6%) participants 'never' read such materials.

The findings presented under this sub-section bring out the important role of frequent and continuous engagement with M&E resource materials to improve capacity in M&E, which is

necessary for encouraging utilization of infrastructural facilities by disabled learners. Through continuous engagement with M&E materials such as *project proposals, plans, matrices, methods and tools* as well as *reports*, teaching staff are likely to improve their capacity to influence utilization of infrastructural facilities by disabled learners.

Influence of Human Resource Capacity for M&E on Utilization of Infrastructural Facilities

The four indicators of human resource capacity for M&E, presented in Table 6, were aggregated and cross-tabulated with the dependent variable - utilization of infrastructural facilities by disabled learners. The results reveal significant associations between the dependent variable and all the four indicators of human resource capacity for M&E. In addition, the results show a significant relationship between the aggregated independent variable, human resource capacity for M&E and utilization of infrastructural facilities by disabled learners. Based on this, the null hypothesis, which stated that *there is no significant relationship between utilization of infrastructural facilities by disabled learners and human resource capacity for M&E*, was rejected for being inconsistent with empirical data.

Table 6: Summary of cross tabulation analysis for human resource capacity

Indicators	Computed χ^2	df	ρ-value
Access to training on M&E of disability programs	9.336	2	0.009***
Participation in M&E activities	9.408	4	0.052*
Level of experience in M&E practices	11.138	4	0.025**
Reading M&E resource materials	11.925	4	0.018**
Aggregate: Human resource capacity for M&E	**7.864**	**4**	**0.075***

*,**,*** show significance at ρ<0.1, ρ<0.05 and ρ<0.01 error margins, respectively

Furthermore, binary logistic regression results summarized in Table 7 show that that participants perceiving their capacity in M&E to be 'high' had about 6.4 times the odds of positively influencing utilization of infrastructural facilities by disabled learners as their colleagues perceiving their capacity in M&E to be 'low' (ρ-value = 0.022, β = 1.854, OR = 6.385, C.I. = 2.097-19.439). The results suggest up to 95% chance that improving the capacity of teaching staff in M&E practice is likely to have a positive influence by increasing utilization of infrastructural facilities by disabled learners.

Table 7: Summary results of the adjusted logistic regression model

Covariates	β	S.E.	Wald	df	Sig.	Exp(β)	95% C.I. for EXP(β)	
							Lower	*Upper*
HRcapacity			14.663	2	0.075*			
High	1.854	0.568	10.654	1	0.022**	6.385	2.097	19.439
Average	0.352	0.180	3.824	1	0.249	1.422	0.999	2.023
Low (RC)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Constant	1.773	0.417	18.078	1	0.012**	5.888		

*,**,*** show significance at ρ<0.1, ρ<0.05 and ρ<0.01 error margins, respectively

Consequently, the national polytechnics should invest in training teaching staff on M&E of disability programs, through regular workshops and seminars. This will require the institutions to seek strategic partnerships with relevant government institutions and non-governmental organizations, as well as bilateral development agencies to support a 'consistent' program for staff development. Furthermore, the institutions should consider formulating a policy linking teaching staff and M&E departments. Such initiative is likely to

provide opportunities for teaching staff to participate in M&E activities, which is an important avenue for gaining hands-on experience and improving their capacity. Human resource capacity in M&E may also be improved by providing appropriate resource materials and making such accessible to all targeted beneficiaries. Continuous engagement with M&E resource materials and their authors is important for deepening knowledge, sharpening M&E skills and improving the quality of support provided to disabled learners.

CONCLUSIONS AND IMPLICATIONS

The purpose of this study was to examine the influence of human resource capacity for M&E on utilization of infrastructural facilities by disabled learners in Kenyan national polytechnics, namely Eldoret and Kisumu. Human resource is an important element in the effectiveness of M&E systems in all sectors, including technical education and training institutions. Human resource is particularly important in terms of capacity to develop systematic monitoring frameworks and sound work plans, as well as information quality standards, among others.

In this regard, the study revealed that teaching staff rating their capacity in M&E as 'high' had better odds of positively influencing utilization of infrastructural facilities by disabled learners as their colleagues grading their capacity as 'low'. The findings further show up to 95% chance that improving the capacity of teaching staff in M&E practice is likely to improve consistency in the utilization of infrastructural facilities by disabled learners. In view of this, improving human resource capacity for M&E is a key factor that all stakeholders, including national polytechnics, Ministry of Education, Teacher Service Commission, and the National Treasury, should prioritise in order to strengthen M&E systems in the institutions; thereby, improve utilization of infrastructural facilities by disabled learners.

Improving human resource capacity in M&E requires interventions at two levels; viz. national and institutional. At the national level, the Ministry of Education, TSC, and Treasury have an important role by allocating more funds for developing the capacity of teaching staff on M&E; as well as recruiting more teachers who are specialized in visual, audio and speech forms of disability. This should go hand-in-hand with providing a variety of infrastructural facilities to national polytechnics to improve the quality of support provided by teaching staff. The stakeholders should also create favorable policies to encourage non-government agencies and faith-based institutions to initiate TVET programs to absorb learners who may not get places at the national polytechnics due to human resource capacity gaps.

At the institutional level, the content of training curriculums should be improved to make them more responsive to the needs of all learners with disability, particularly regarding utilization of infrastructural facilities. The institutions should also procure and/or subscribe for appropriate M&E resource materials, sensitize teaching staff about the same to encourage continuous reading in order to deepen knowledge in M&E within contexts of disability, sharpen M&E skills and improve the quality of support provided to disabled learners.

Improving human resource capacity at the institutional level will also require appropriate policies encouraging participation of teaching staff in various M&E activities, including awareness creation, monitoring utilization of infrastructural facilities, as well as utilization of M&E results. Participation in such activities is an important avenue for teaching staff to gain hands-on experience as well as improve their capacity and responsiveness to the needs of disabled learners. Equally important is the need for strategic partnerships with relevant government institutions such as NCPLWD and non-governmental organizations, as well as

bilateral development agencies, through which additional financial and technical resources can be mobilized to support staff capacity development.

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