



Digitization of TEVT M&E





Monitoring & Evaluation (M&E)

- M&E is an important quality assurance management tool that enables management to:
- Track the progress over the period of time,
 - based on the planned intervention areas,
 - indicators, outputs, activities and
- Subsequently, evaluating it for the impact level desired results, sustainability and improvement areas.



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Quality Assurance

- In TQM, quality refers to the satisfaction of “customers”, both internal & external.
- “Assurance” in the context of TEVT refers,
- to set minimum standards in order to fulfill the satisfaction of changing trends of the industry.



Digitization of M&E in the TVET sector is conceptualized as under at three levels:

- Strengthening of the M&E at national level (NVQF Registry system)
- Strengthening of M&E at the TEVTAs/PVTC/Directorates level &
- Strengthening of M&E at the TVET institutes level (Digitization)



The objective is:

- To develop, strengthen and functionalize the M&E system by providing technological M&E access of the Institute's operations to:
- Principal in the institute
- Functional heads of PVTC/TEVTAs sitting in the HQs
- MD/COO/Chairman of PVTC/TEVTAs sitting in the HQs



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Strengthening of M&E at PVTC/TEVTAs level with:

- Standardized and notified internal work process for the M&E mechanism.
- Digitized M&E system to monitor operational status and quality assurance status of the institutes.
- Comprehensive annual work plan with clear indicators, outputs, activities, timeline, responsibilities with M&E mechanism.

Benefits of M&E system in TEVTAs

- Tracking of work progress with clearly defined organizational direction
- Measure the department level and individual level performance inline with the TVET reforms for annual performance evaluation, transparent reward system and for the operational & strategic level improvements in TEVTAs.



Strengthening of M&E at TEVTAs/PVTC level with:

- Formulation & notification of cross sectional M&E committee
- Comprehensive annual work plan with clear indicators, outputs, activities, timeline, responsibilities with M&E mechanism.
- Standardized internal work process for the M&E of TEVTA/PVTC annual work plan.
- Digitized M&E system to monitor operational status and quality assurance status of the institutes.



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Rational

Due to the geographical spread, administrative, financial and HR constraints, it is critical to visit all the institutes with a regular interval of time for the M&E purpose and for other planning and management decision making.

So,
Technological solution of “Digitization” is the pre requisite for the effective and efficient “TVET M&E”.



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Features of “Digitized M&E System”

- Real time access to data regarding:
 - Live attendance & reporting
 - Trades/qualifications, enrollment status
 - Academic performance/annual result of institute, teacher and student
 - Staffing & Training
 - Tracer study
 - Accreditation status
 - Budget utilization
 - Monitoring of CBT&A session
 - Quality assurance



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The specific features of the digitized device of the M&E system will be as under:

- GSM/GPRS/SMS based attendance recording and reporting system
- Audio/video recording
- CCTV motion/face recognition
- Charge control system
- Lithium battery
- Data sim
- Cloud based server
- Mobile application
- Software application for the above features



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Functionalization of the M&E section in the TEVTAs/CoE

- Placement of dedicated officer and staff
- Formulation of cross-sectional M&E committee
- Capacity building on the proposed concept of the “Digitized M&E System”.
- Conduct of monthly M&E meetings, QA focus group discussion, preparation of M&E reports indicating effectiveness and efficiency, impact and sustainability.
- Recommendations for the management decision making with strong follow up for the planning, decision making and implementation.





NVQF registry in M&E framework

NAVTTTC, TEVTA's and QAB's management can online monitor:

- Number of institutes offering NVQs,
- Enrollment of the candidates in NVQs,
- Allotment of the registration number through NVQF registry system by the QABs,
- Status of the regular conduct of formative assessments,
- Issuance of the schedule of integrated assessment,
- Conduct of integrated assessment,
- Issuance of the certificate of achievement and certificate of qualification through NVQF registry system.



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- Demonstration of Digitized M&E System
- Demonstration of NVQF registry
- Internal Work Processes of the M&E
- Annual Work Plans



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Background/Rational

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- Monitoring and Evaluation (M&E) is an important management tool that enables management to track the progress over the continuous interval of time based on planned interventions and subsequently, evaluating it for the impact, quality assurance and sustainability. We are living in the world of information technology where organizations are giving preference to have real time information exchange from the field offices (TVET institutes) to the Head Offices (TEVTAs). Organizations are preferring to receive digital online information for quick data processing, solutions, planning and decision making. As geographically, Pakistan is a big country and the TVET institutes are also scattered far & wide from their HQs across the country. The traditional on spot monitoring/inspections have been always proved as controversial, counterproductive, time and resource consuming and also due to the limited availability of human resources in the TEVTAs; it is administratively quite difficult to perform manual M&E responsibilities with the regular interval of time. So, providing the digitized M&E solutions are the utmost requirement of the time and it will also promote and develop technology based culture in the entire TVET sector of Pakistan. The digital solutions will help the top management and middle management of TEVTAs to enjoy paperless environment and can have direct access to their TVET institutions through their fingers tips in terms of trades/qualifications, enrollment status, class attendance, daily lesson plans, staff attendance, institutes performance, teachers performance, students performance, staff placement, update of budget utilization, tracer studies, accreditation status, CBT&A implementation etc. Digitizing of the M&E is also essential to capture lessons learned in order to manage, apply and share operational level dynamic knowledge within the TVET organizations for the purpose of continuous quality assurance in the context of overall Organizational Development (OD) of TEVTAs and TVET institutes.
- Against this background / rational the features of the digitized M&E system in the TVET sector are conceptualized as under:

Features of the digitized M&E system in TEVTAs

- Staffing & training Placements of sanctioned positions have been always a crucial issue in the TVET institutes. The online M&E system will provide updated information of the admin staff and teachers placement in the institutes and will online show the updated status of the filled and vacant positions and also the status of curricula compliant faculty. The updated staff/teaching position will also be helpful to do the succession planning in terms of identify the retiring teaching staff and prepare the hiring and placement plan. The status of staff trainings will also be monitored online. It will highlight whether the teaching staff deputed in the institute is trained or not and will also monitor the frequently trained staff versus staff who are waiting for the training opportunities.
- Enrollment status The updated information regarding the implemented trades/qualifications, the enrollment capacity and the actual enrollment shall be online available for monitoring.

- Academic performance of institute, teacher and student The annual academic performance/result and drop outs shall be online available. Through this, the performance/result and drop outs shall be analyzed by correlating overall academic result of the board with the specific institutes and principal/teacher. For this purpose, an online link will be created between the boards & TEVTAs.
- Accreditation status The TEVTAs can online access the quality assurance through accreditation of each of their institute with the compliance status based on the national accreditation standards. The standardized self-assessment form will provide comprehensive look of the institute online in a brief possible way for bringing continuous improvements.

- Monitoring of CBT&A session NVQF manual 3 has prescribed specific criteria for the monitoring and quality assurance of CBT&A sessions. The monitoring form and survey forms available in the manual will be online available for the data entry and can be crossed check with the information of registry system, accreditation process and through on spot random monitoring.
- GSM based live attendance The live and updated information regarding the online attendance of teachers, support staff and students shall be online available for the purpose of monitoring and subsequently its SMS based reporting.
- Teaching & learning This feature is comprised of updated lesson plan, conduct of practices, job sheets, internal assessments, required machinery/ equipment/tools and consumables.

- Electronic stock register The stock register will be online available comprised of the elements of consumables register, equipment repair, furniture etc.
- Institute Management Committee The feature of IMC is composed of date of notification of the IMC, members of IMC, meetings with agenda points and contributions of the IMC. The updated and functional status shall be online available.
- Budget utilization (training material/consumables) The budget utilization will be monitored per institute by the management. The updated status of training material budget will be trade wise monitored for the purpose of imparting quality trainings.

- Tracer study – Tracing Pass outs The online system is equipped with the provision to generate sms. So this feature can be used at any time for feedback, job status and to trace the pass outs for bringing improvements in quality, planning and decision making.
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- Quality assurance & M&E reports Quality assurance shall be covered through the development of trade wise focus groups. These groups will discuss findings based on the CBT&A monitoring tool. Success factors, challenges in the training implementation, improvements, way forward and specific responsibilities will be assigned based on the focus groups findings. Proceedings will be online available.

- Technological solutions for live attendance system The technology supported digitized M&E system will have built-in, SIM based, wireless data transmission technology, with log record capacity. The system caters efficiently to large manpower arenas. The system authenticates users by their fingerprints, Cards, PIN codes and all possible combinations thereby providing well integrated solutions. The system will be based on Linux PIT operating system that will enhance its consistent performance further with optimum stability and perfect reliability.
- The specific features of the digitized M&E system will be as under:
 - GSM/GPRS/SMS based attendance recording
 - Audio/video recording
 - CCTV motion/face recognition
 - Water/dust proof casing
 - Solar panel 15v (Charge control system)
 - Cloud based server
 - Software application for the above features
 - Customer support system

- Functionalizing the M&E section in the TEVTAs The M&E sections across the TEVTAs shall be redesigned and functionalized. The unavailability of the required staff will be advocated to the TEVTA's top management for placement. M&E cell will be established and capacity building will be provided on the proposed concept of the digitized M&E system. The M&E sections will be operationalized by notification of cross functional committees in each TEVTA, conduct of
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- monthly meetings, QA focus group discussions, preparation of evaluation reports indicating the effectiveness & efficiency, its impact and sustainability. The M&E reports will highlight tangible recommendations for the management decision making with strong follow up for the planning, decision making and implementation.



Thank you