NAST Conference Breakaway Session Feedback Template

**Theme: Innovating Technical Education for a Changing World**

**digitalTechnology / cat**

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Group Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: 01 July 2025

Session Topic (Extension):

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## 1. Aligning Curriculum with Industry Needs

How can technical education align the curriculum with industry's needs?
Please provide practical strategies and planning for improved relevance and responsiveness.

**Curriculum Alignment Strategies:**

* **Industry Consultation & Partnerships**
Engage IT companies, software developers, and digital media experts to review curriculum content and suggest updates.
* **Regular Curriculum Updates**
Review and revise CAT and Digital Tech syllabi every 2–3 years to reflect emerging technologies (e.g., AI, cloud computing, cybersecurity).
* **Skill Gap Analysis**
Identify skills in demand (e.g., coding, spreadsheet modelling, data analysis) and ensure learners are equipped accordingly.
* **Integration of Certifications**
Align learning outcomes with industry certifications (e.g., Microsoft Office Specialist, ICDL) to enhance employability.

**Practical Strategies for Relevance:**

* **Project-Based Learning with Real Scenarios**
Let learners solve real-world business problems using spreadsheets, databases, and digital tools.
* **Guest Lectures & Industry Workshops**
Invite professionals to demonstrate current tools, trends, and workplace expectations.
* **Workplace Simulation Activities**
Create tasks that mimic office environments: data capturing, digital communication, and report creation.
* **Exposure to Open Source and Cloud Tools**
Introduce tools like Google Workspace, Canva, Trello, and GitHub to reflect real tech workplaces.

**Planning for Responsiveness:**

* **Annual Curriculum Review Committee**
Include teachers, curriculum advisors, and IT professionals to monitor tech trends and adapt the curriculum.
* **Feedback from Alumni and Employers**
Collect feedback from former students and companies to understand how well-prepared learners are.
* **Professional Development for Educators**
Offer training to CAT and Digital Tech teachers in new technologies and teaching methods (e.g., coding platforms, AI tools).
* **Pilot Innovative Content**
Test new content (e.g., app building, robotics, digital marketing basics) in selected schools before wider rollout.
* DBE should make recommendations based on the industry needs, to adjust the curriculum
* Learners should be able to do more than one technical subject, e.g., doing civil and mechanical subjects. – Recommendations to universities for student Major`s
* Mega-tronics should be available at more universities.
* For learners doings mechanics should also be able to work on PC` s for running diagnostics.
* More collaborations for teachers from different provinces for sharing best practices.
* Pilot projects should get more attention.
* We need people to teach the subjects even if they only have the red seal, they are fully qualified in the field. They have the knowledge and the skills, they should be able to register for SACE.
* Collaborating subjects and different stakeholders.

## 2. Addressing Teacher Shortages in Specialized Technical Subjects

Specific ideas and suggestions to address teacher shortages in specialized technical subjects.
Consider recruitment, training, and retention strategies based on current realities.

Group Insights & Recommendations:
**Recruitment Strategies:**

* **Incentivize Teaching Careers**
Offer bursaries, study grants, or fee waivers for IT/digital tech graduates who commit to teaching CAT/Digital Technology.
* **Fast-Track Certification for IT Professionals**
Create a streamlined program for IT industry professionals to become qualified teachers without a full 4-year degree.
* **University-School Partnerships**
Partner with universities to identify strong final-year IT students to complete teaching internships in schools.
* **Raise Awareness in Schools**
Promote teaching CAT as a fulfilling and stable career path during career guidance sessions at high schools.

**Training Strategies:**

* **Up-Skill Existing Teachers**
Train teachers from other subjects (e.g., EMS, Business Studies) in digital technologies to allow cross-teaching.
* **Modular Online Training Programs**
Offer flexible online certification modules for current educators who want to switch to CAT or Digital Tech.
* **National Digital Teacher Bootcamps**
Host intensive holiday workshops to rapidly equip teachers with practical digital and teaching skills.
* **Mentorship and Peer Learning**
Pair new or transitioning teachers with experienced CAT teachers for support and on-the-job learning.

**Retention Strategies:**

* **Competitive Salaries & Allowances**
Provide rural incentives or subject-specific allowances to retain skilled CAT/Digital Tech teachers.
* **Professional Growth Opportunities**
Offer continued training in new technologies (e.g., coding, data science, AI tools) and digital certifications.
* **Recognition and Awards**
Acknowledge top-performing teachers with awards, certificates, or opportunities to attend tech conferences.
* **Supportive Work Environment**
Ensure access to functional computer labs, reliable internet, and digital resources to reduce frustration and burnout.
* Looking for people with red seal/ N6 and the knowledge, but they can’t be appointed.
* Department should provide bursaries for the teachers trying to do PGCE and advanced diploma.
* SETA`s should help more with technology subjects and should also help with bursaries for well performing learners.
* The red seal holders are frustrated; they are stuck in SGB post.
* Constant upgrading of teacher skills.
* In Gauteng teacher development is based on Grade 12 results, only underperforming teachers are invited to these skills development.

## 3. Enhancing School-Industry Partnerships

How can technical schools participate in and benefit from school-industry partnerships?
Include workplace exposure opportunities for learners.

Group Insights & Recommendations:

**How Technical Schools Can Participate:**

* **Establish MOUs with Local Tech Companies**
Formal agreements with IT firms, design studios, or data centers to provide learner support and opportunities.
* **Adopt-a-School Initiatives**
Invite tech companies to “adopt” a school—donating software, offering mentorship, or hosting events.
* **Advisory Panels with Industry Experts**
Include professionals in curriculum planning to ensure relevance to workplace needs.
* **Join Tech Education Networks or Hubs**
Be part of digital learning collaboratives where schools and industry share best practices and resources.

**Workplace Exposure Opportunities for Learners:**

* **Job Shadowing Days**
Allow learners to spend a day observing IT professionals (e.g., programmers, database managers, graphic designers).
* **Short-Term Internships**
Partner with businesses to place learners in admin, helpdesk, or design roles during holidays or after exams.
* **Hackathons & Coding Challenges**
Co-host problem-solving competitions with companies where learners tackle real-world tech problems.
* **Guest Speakers & Career Talks**
Schedule monthly talks where industry experts explain their jobs, tools they use, and future tech trends.
* **Virtual Industry Tours**
Use platforms like Zoom/Teams to let learners tour tech companies remotely and interact with staff.

**Benefits for Technical Schools:**

* **Access to Latest Tools & Software**
Industry partners may provide licenses, trial versions, or discounted software.
* **Improved Curriculum Relevance**
Schools stay updated with current skills (e.g., cybersecurity basics, cloud computing, AI).
* **Increased Learner Motivation**
Real-world exposure helps learners see the purpose of CAT/Digital Tech and inspires career interest.
* **Better Employment Opportunities**
Learners gain references, basic work experience, and possible job offers post-matric.
* Broaden the horizons for the subjects, teachers from “sister subjects” should also help conveying content, because learner are struggling at university level.
* IT companies can come and show the learners the changes and the how the industry is working.

## 4. Gaining Recognition as Special-Focus Schools

How can technical schools gain greater recognition as special-focus schools?
Explore branding, policy, and community engagement approaches.

Group Insights & Recommendations:

**Branding Approaches:**

* **Create a Strong Digital Identity**
Develop a modern school website and active social media pages showcasing CAT projects, tech clubs, and success stories.
* **Highlight Unique Programmes**
Promote coding classes, app development, robotics, or digital design as signature offerings of the school.
* **Use Student Success Stories**
Publicize achievements of learners in tech competitions, certifications, or internships to build credibility.
* **Position the School as a Digital Hub**
Brand the school as a leader in digital education through slogans, logos, and media campaigns (e.g., "Empowering Future Tech Leaders").

**Policy & Institutional Support:**

* **Apply for Official Specialisation Status**
Work with education departments to register the school as a formal "Focus School" in Digital Tech or e-Learning.
* **Align Curriculum with National Digital Skills Frameworks**
Ensure that CAT and Digital Tech offerings meet or exceed national standards for digital competency.
* **Partner with Policy Makers**
Engage with district and provincial officials to pilot new digital learning models or content.
* **Secure Recognition through Awards**
Enter school-based ICT competitions and innovation awards to gain visibility and status.

**Community Engagement Strategies:**

* **Host Tech Fairs and Showcases**
Invite parents, businesses, and local schools to learner exhibitions and demo days.
* **Offer Community Digital Literacy Classes**
Provide after-hours or weekend computer training for the public to build trust and community value.
* **Collaborate with Local Businesses**
Co-host events, fundraisers, or digital workshops with local partners to increase visibility and support.
* **Establish a School Tech Alumni Network**
Involve successful past students in mentorships, sponsorships, and advocacy.
* School mangers should promote the school in a more positive light
* Open days
* Industry involvement
* Minimize the gap.
* Learners should have the opportunity to choose a school, where they can choose the right subject package.
* SMT and school managers should be more onboard with technical subjects.
* Universities should also help with the promotion of the schools.
* (Facebook, social media)
* Stakeholders should help the communities through bursaries, learnerships.
* Companies should allow schools to do excursions.

## 5. Integrating eLearning in Practical Subjects

Will the integration of eLearning platforms in practical subjects be effective?
How can we prepare for this future-oriented shift? Identify tools, training needs, and implementation steps.

Group Insights & Recommendations:

**Will eLearning Platforms Be Effective for Practical Subjects (CAT & Digital Tech)?**

**Yes, eLearning Can Be Effective, Because:**

* **Simulates Real Work Environments**
Platforms like Google Workspace, Microsoft 365, and coding sandboxes mirror real-world digital tools.
* **Allows Self-Paced Learning**
Learners can revisit tutorials, work on tasks at their own pace, and develop deeper understanding.
* **Enables Remote Access to Tools**
Cloud-based software lets students practice anywhere—reducing dependency on school labs.
* **Provides Instant Feedback**
Many platforms offer auto-marking, feedback, and interactive tasks (e.g., quizzes, drag-and-drop exercises).

**Tools for eLearning in CAT & Digital Tech:**

* **Learning Management Systems (LMS):**
Google Classroom, Moodle, MS Teams for managing tasks, lessons, and communication.
* **Interactive Practice Platforms:**
TypingClub (typing skills), Excel Easy (spreadsheets), Replit (coding), Canva (design).
* **Simulations & Virtual Labs:**
Tinkercad (basic circuits), Code.org and Scratch (programming logic), TestOut (IT scenarios).
* **Cloud-Based Software Suites:**
Microsoft 365, Google Workspace, LibreOffice Online for document, spreadsheet, and presentation practice.

**Training Needs:**

* **Teacher Training in LMS Use**
Teachers need training on setting up classes, creating digital tasks, and tracking progress.
* **Digital Pedagogy Skills**
Educators must learn how to adapt traditional practical lessons into interactive online modules.
* **Cyber Safety & Digital Citizenship**
Both teachers and learners must understand safe and ethical digital practices.
* **Tool-Specific Workshops**
Practical training on spreadsheet tools, coding platforms, design software, and database applications.

**Implementation Steps:**

* **Pilot in Selected Classes or Grades**
Test eLearning tools with one grade before scaling schoolwide.
* **Develop Blended Learning Schedules**
Combine in-class and online activities for flexible learning environments.
* **Ensure Device & Connectivity Access**
Equip students with laptops/tablets and access to stable internet or offline content options.
* **Create Digital Resource Libraries**
Curate tutorials, videos, and worksheets aligned with the CAPS curriculum.
* **Monitor, Support, and Adjust**
Regularly collect feedback, troubleshoot challenges, and update content and strategies as needed.
* Only content subjects are getting tablets, with pre-loaded videos and notes, but they aren’t used for technical subjects.
* Using Whatsapp, to communicate and share resources with learners and teachers.
* Creating interactive videos.
* Teacher can create customized content based on the learner’s cognitive level.
* Learners should be trained on using AI (ChatGPT) based on their different subjects.

## Summary of Group Feedback

Top 3 Recommendations:
1.
2.
3.

Challenges Identified:
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Proposals Worth Scaling or Piloting:
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