BERLIN BRANDENBURG INTERNATIONAL SCHOOL

BBIS TECHNOLOGY VISION AND STRATEGIC PLAN

Our vision is to develop digital citizens and lifelong learners who are equipped with the knowledge, understanding, skills and values to contribute positively to a changing world. They are inspired and empowered to use technologies collaboratively and find innovative answers to real world challenges that further diversity, fairness, human rights and justice.

CONTRIBUTING, INNOVATIVE, FAIR.

We believe that Information Communication Technology (ICT) and Educational Technology (EdTech) integration is effective when:

- The integration of technologies is intentional, purposeful, authentic, and future focused.
- The school environment is collaborative, inspirational, dynamic, and safe.
- The community uses technologies to take innovative actions to address local and global issues.
- Application of ICT and EdTech supports BBIS learning principles.
- Our students are highly skilled, adaptable, resilient, and are able to self-regulate.
- Technologies are used to build strong family, school, and community partnerships

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STRATEGIC OBJECTIVES

TECHNOLOGY INFRASTRUCTURE AND OPERATIONS

1 - InfraOps

By 2025, BBIS staff, students, and community will have access to stable, secure, efficient, current, reliable, and ethical technology resources and policies.

2 - InfraOps

By 2025, BBIS will plan and implement a fast, secure, and campus-wide Wi-Fi internet access.

3 - InfraOps

By 2025, BBIS will have proactive, transparent, agile, and flexible processes for technology support and network management that focuses on empowering the end user.

TECHNOLOGY CURRICULUM

By 2025, a vertically and horizontally aligned technology curriculum with explicit instruction will be framed, including a personalized assessment cycle, and delivered through disciplinary, interdisciplinary or transdisciplinary approaches as appropriate to each IB programme.

TECHNOLOGY PROFESSIONAL DEVELOPMENT

By 2025, adequate, effective, relevant, and ongoing professional development and training will support successful technology integration at BBIS.

TECHNOLOGY INTEGRATION

By 2025, best practices for technology integration will be used across all grade levels and subjects at BBIS.

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TECHNOLOGY INFRASTRUCTURE AND OPERATIONS

ACTIONS

1-InfraOps

Inventories

- EdTech Integrators and the Information Technology (IT) department create a continuously updated and accessible inventory of all BBIS technology hardware and software. The inventory should be accessible to teachers.
    - Set an agreed replacement timeline.
    - Phase out or upgrade dated technology hardware.
- Create a central database of subscriptions and regularly update with information about new or cancelled subscriptions. The database should be accessible to teachers.
- Create a central database with application owners.
- Create an EdTech library that includes the life cycle of apps, programs, software, and access to all resources/materials/physical technology related resources. This library should be accessible to teachers.

Technology Toolkit

- After reviewing all technology productivity tools across the school, the school will decide on the single platforms and tools that will be used across the school.

New Students

- Technology induction plan for new students, aligned with Admissions office.
    - Create lists of IT related items that need to be set up before Day 1 of school for the student (e.g. iPad, email ID).

IT Department Processes and Procedures

- Clearly define processes that are time-sensitive, for 'ordering'/'buying' resources, Applications, programs, software licenses.
- Ensure that processes and procedures for all technology-related operations:
    - Support innovation.
    - Identify the process to take feedback from students and staff.
    - Have accountability for purchase of hardware, software and online tools, and the management of those devices and applications.
    - Include processes to ensure GDPR compliance, including the lawful basis for data processing, Vendor Assessment of the App, and Data Processing Impact Assessment.

- Decision tree identifies who makes decisions, who is a recommender, who has input, etc. in the IT Department's RAPID decision-making model.
- Inventory of who has influence into IT decision making (marketing, human resources, etc).
- Implement a purchase order approval process to ensure pedagogical leadership oversight of large purchases.

Cybersecurity

- Conduct a Cyber Vulnerability Assessment and a Google Cloud Security Assessment by an external consultant. Address the gaps highlighted in the assessment to secure the BBIS network and data assets.
- Set up a schedule for an annual Cyber Security audits, and address areas highlighted in the audits.
- Annual Cyber Hygiene Checklist distributed to everyone with the most basic security tasks including updating, backing up, password protocols, and other do's and don'ts divided by sections for everyone, and subsections for students, parents, teachers, and staff.

Student Information System

- Hire a database administrator who manages Managebac, iSAMS, Open Apply and other systems. IT will work to synchronize the data in all school systems.
- Create a map of all the databases that the school uses. Review the systems and work to sync systems to reduce data entry and increase efficiency and productivity.

2-InfraOps

- Conduct a Wi-Fi access and connectivity audit. The audit should cover all the buildings and spaces where Wi-Fi access is required as determined by leadership after considering the teaching and learning needs of the students.
    - Inventorize Wi-Fi systems installed at the school.
    - Describe in detail the system requirements.
    - Address gaps in Wi-Fi connectivity highlighted in the audit.
        - Plan for optimal Access Point specs and placement.
        - Plan sequence, timeline and funding for upgrade and replacement cycle.
        - Present to Managing Directors and pedagogical leadership for approval.

3-InfraOps

Devices

- Determine device specs and provision plan for student devices in grades 6 to 12 (BYOD, lease, school-supplied or other model of provision).
    - Communicate the provision plan to teachers, students and parents.
- Create standards for equitable access to devices for all students.

IT Help Desk

- Publish IT Support procedures that explain the process for requesting IT support and set reasonable response times.
    - Provide responsive support in either IT room, or through a phone call, with prompt help/assistance.
    - Create a drop-in Help Desk Office Hour program to answer all IT support questions.
    - Create and regularly update a centralized knowledge base of solutions in a question and answer format.
    - Make Frequently Asked Questions and Knowledge Bases available to students and staff to empower them.
    - Implement Hubspot to receive all support requests and to distribute to the appropriate personnel for resolution.

Teachers

- Provide computers to teachers with necessary guidelines to maintain safety and comply with European General Data Protection Requirements (GDPR), and an understanding of the consequences of data and security breaches.
    - Provide training for teachers and staff to make them familiar with European General Data Protection Requirements (GDPR), and technology use risks and benefits.
- To the extent that BBIS restricts computer customization by teachers, an explanation of such restrictions will be provided.

IT Staffing

- Create a service level agreement for each role in the area of technology support. This will clearly communicate to the school the responsibilities and policies that are in place.
- The IT department will operate two different sections: Help Desk and Systems Management.
- IT Staff will prioritize issues that disrupt instruction and learning.

- Create a job description for a K-12 Technology Coordinator whose role has oversight of both ICT & EdTech integration and the IT department, and recruit for this position.
- Create a job description for the EdTech Integrators.
- Complete a review of IT personnel and practices and identify optimum staffing levels, training needs and practices to ensure effective customer service-oriented delivery of services.

Parents

- All parent communication (forms, consent) is centralized on a sharing platform.
- During orientation week, at the beginning of the year, parents are trained on how to access documents like forms, etc. Support is provided for families that join mid-year or at various times during the year.

Policies and Practices

- Standardize communication and storage of all documentation in Google Drive.
- Meeting agendas and takeaways after each meeting are documented and shared.
- Create an agreement to ensure that student data and school-related data is in Google Drive.
- Create and communicate a Responsible Use Policy for technology for stakeholders, including students, teachers and other staff.
- Draft and implement agreed practices for the communication of shared expectations regarding technology use to staff, students and parents.

TECHNOLOGY CURRICULUM

ACTIONS

Tech Standards

- Adopt and implement standards (e.g. ISTE Standards, TIM Matrix, DQ Framework) for students, educators, educational leaders, technology integrators and IT department, to improve student learning outcomes.
- Develop and assess grade and age appropriate minimum technology competencies. Include passwords, password security, use of social media platforms, research and information literacy, cyber security, cyber hygiene and digital citizenship.

- Ensure that:
    - Progression and transition is strong between Primary and Secondary
    - Digital Citizenship curriculum is current and relevant.
    - Information Literacy curriculum is current and relevant.
    - Students are prepared to use social media platforms safely and responsibly.
    - Standards are aligned and integrated with the IB programmes, curriculum, mission and objectives.

Students

- Create opportunities within the schedule for transdisciplinary, interdisciplinary or cross-curricular student led projects.
- Create a speaker programme of outside experts to explain and highlight trends, new developments and careers in technology.
- Explore the creation of tech-related field trips, internships and apprenticeship programmes in the community outside of the school.
- Create a BBIS Tech Award for students with an outstanding contribution to technology at BBIS.
- Create a college preparation program for the leading Technology universities (e.g. ways for students to meet the requirements for entry to MIT, and similar leading educational institutions).

Courses

- Create and implement a Grade 1 to 12 Coding scope and sequence.
- Offer courses and extra-curricular activities in current technologies and their applications - for example:
    - Drones
    - Course in Fake News, Bots, Trolls and the sourcing of information tied to current events
    - Maker and Design courses - use of 3D printers, laser cutters, Computer Numerical Control (CNC) machines, etc (e.g. to create low-cost prosthetics)
    - Blockchain, Augmented Reality, Virtual Reality, Artificial Intelligence
    - Data Analytics
    - Robotics
    - Ethical Hacking
- Design a MS and HS (Grades 9 and 10) version of the IB ITGS course - real world applications of technology, related issues, and social and ethical implications.
- Consider the introduction of IB Diploma Programme ITGS and Computer Science courses to grades 11 and 12.

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TECHNOLOGY PROFESSIONAL DEVELOPMENT

ACTIONS

Technology Competencies

- Define current and relevant technology skills and knowledge required by each department/grade level. Use this to define the minimum technology competencies for all staff.
- Develop a self-assessment rubric to help teachers identify their skill level and areas for growth.
    - Include this in the school's appraisal process.
- Create a staff technology skills assessment instrument.
    - Conduct an annual staff technology skills assessment, an audit of skills to help identify the types of professional development required.

Technology Toolkit

- Develop a Technology Toolkit that includes specific tools for each subject.
    - Develop a plan to train teachers and implement the use of the toolkit.
    - Technology Toolkit Professional Development (PD) and all technology PD should have instructional videos or online instructions to aid the professional learning process and to differentiate.

Technology Integration Goals

- Technology Integration Goals are included in the annual reviews. Develop a process for personal professional growth goals for faculty each year across the school. Administration will work with faculty to develop action steps to support this growth. Goals should include technology proficiency.
- Ensure BBIS professional development aligns with the goal of technology integration. Design a program with predefined learning paths (roadmap) for faculty as potential PD with suggested milestones and feedback. Integrate into the appraisal process.

Culture of Technology Integration

- Create a system of coaches to create a collaborative atmosphere and support the implementation of tech practices.

- Professional development opportunities to build and grow a culture of tech integration:
    - All tech professional development for teachers ensures that the technology curriculum is planned, taught and assessed in every subject.
    - Conduct Teach-the-Teacher workshops to raise the skill level of faculty.
    - Highlight faculty/staff that have knowledge, expertise in specific skills, and demonstrate best practices in technology integration. Organize short 5-minute tech shares at the beginning of every staff meeting.
    - Offer differentiated PD that includes an element of choice. Consider organizing internal workshops led by faculty to share their knowledge and skills.
    - Create an easily-accessible and tiered knowledge-sharing platform/website.
    - Tech Integration is supported by Ed Tech Coaches that provide just-in-time PD support to teachers.
    - Create a school-wide shared portfolio to host collections of artefacts created by staff after their PD experiences. Share regularly at staff meetings. This allows teachers to actually see examples of what successful technology integration looks like.

Future Innovation

- Stay abreast of emerging technologies and pedagogies.
- EdTech Integrators connect with departments and teachers regarding applicable technologies and support PD in the emerging technologies.
- Provide teachers with information and guidance about those pedagogies and technologies that align with the technology vision.
    - Available current technologies (hardware and software) and their use.
    - Current teaching and learning best practices and pedagogies like maker learning and online learning that require the use of technology.
    - New technology innovations (present and future) that will impact teaching and learning.

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TECHNOLOGY INTEGRATION

Leadership

- All school leaders align to make technology integration a school wide goal for 3 to 4 years until a culture of tech integration is built. Review the strategic plan on an annual basis and set targets for the following year.
- Set up a framework to share practices/work to innovate, inspire and teach.

Curriculum & Instruction

- Create a technology skills curriculum map from grade 1 to 12 that is vertically and horizontally aligned, including transdisciplinary links.
    - Include clarity over which aspects of the technology curriculum are being taught by whom and in which subjects.
- Set clear expectations for integrating technology and its documentation.
- Integrate through vertical alignment, the tech curriculum into all three programmes of the IB.
- The EdTech Integrators conduct a yearly audit, collect evidence of learning, and set priorities for the following year.

Coaching

- Implement a grade 1 to 12 EdTech Instructional Coaching model in which the EdTech Integrators coach classroom teachers with a shared understanding of the purpose and methodology.
- Review the necessary time needed for EdTech coaching per division (or IB programme) in the school.

Evaluation

- Measure the quality of technology Integration, e.g. using EdTech assessment models such as TIM or SAMR, and the Bright Bytes survey.

Miscellaneous

- Add a technology social platform component to drug briefings so that students understand the dangers of obtaining drugs from unauthorized online sources.

Cross-reference:
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Next review due: