Avon Maitland DISTRICT SCHOOL BOARD

ADMINISTRATIVE PROCEDURE NO. 161

SUBJECT: BYOD (Bring Your Own Device): Use of Personally Owned Computing Devices on School and Board Networks

Legal References: *Education Act: Section 265 (1) (a) and (j) Duties of Principal: Maintain Order and Discipline and Care of Pupils, Ontario Regulation 298 Section 20 (g) (h) Duties of Teachers: Ensure Reasonable Safety Procedures and Maintain Consistent Disciplinary Practices*

Related References: *Board Policy No. 13 Appeals and Hearings Regarding Student Matters; Administrative Procedure 140 Computers: Acceptable Use and Security; AP 190 Copyright; AP 350 Safe Schools; AP 351 Code of Conduct for Schools; AP 320 Use of the Internet and Electronic Devices by Students; AP 356 Harassment Student to Student; AP 357 Violence-Free Schools; AP 358 Student Suspension; AP 359 Student Expulsion*

Note: This Administrative Procedure outlines considerations that principals should take into account before implementing a Bring Your Own Device program, as well as some suggested procedures to be followed. The decision to implement BYOD is a school one and this Administrative Procedure should be viewed as a guideline to assist in the process, not a mandate to implement BYOD.

1. Implications of BYOD

1.1 As portable computing devices (laptops, tablets, smartphones) have become more and more affordable, students and staff are requesting permission to use their own devices on school and Board wireless networks. While this does afford the opportunity for greater access to online resources for staff and students, there are several factors that need to be considered to ensure that this practice is successful, safe and equitable, and does not compromise the security and efficiency of our networks.

1.2 As more and more portable devices are added to our network, the demands on our bandwidth increase proportionally, resulting in increased costs for both bandwidth itself and for the equipment required to provide access (access points, a Wi-Fi controller, and software to manage authentication, to filter content and to manage bandwidth traffic.) Wireless network access must be managed to prevent corruption by viruses, worms and malware, to prevent inappropriate access, and to shape traffic to ensure that all schools have the access they need.

1.3 Despite the fact that portable computing technology is becoming increasingly more affordable, there will continue to be students whose families cannot afford to provide their own technology or who choose not to. Schools will need to have portable technology available for students who do not have their own devices. Classroom practices and expectations must take into account that not all students will have access to computing technology outside of school (i.e. at home.) Steps will need to be taken to ensure equity of access for all to respond to socio-economic disparities amongst students.

1.4 With increasing numbers of devices, there is also increased potential for student misuse of technology. School staffs must be prepared to teach positive digital citizenship and critical thinking skills and to develop effective responses to inappropriate behaviours such as cyber-bullying, the sharing of personal information, and other behaviours that potentially put students at risk in online environments.

2. Implementation

2.1 Prior to implementing BYOD, school principals should perform a feasibility evaluation to ensure that the school, students, staff and community are ready and willing to embrace this change in practice. The IT Department should be consulted to ensure that the Wi-Fi___33 infrastructure in the school is adequate to handle the implementation of BYOD. Staff should be consulted to determine the readiness and willingness of staff to adopt BYOD. A suitable starting point would be to determine in which grades and/or subject areas the implementation would begin. It would be preferable to implement BYOD in stages, starting with a small number of ready and willing teachers in order to build success and capacity before extending the practice more broadly.

Principals should refer to the BYOD Readiness checklist in Appendix A prior to implementing BYOD in their schools.

2.2 Teacher and staff support is critical to a successful implementation of BYOD and principals should consult with teachers, the TRA and IT Staff to develop a school implementation plan. The plan should include the following:

a) a rationale for the implementation of BYOD,
b) a time frame or schedule for the implementation,
c) changes in pedagogy and assessment practices due to BYOD,
d) designation of online platforms to be implemented,
e) how to support students who don't have devices,
f) a communication plan to inform parents,
g) professional development activities,
h) an updated acceptable use agreement, and,
i) digital citizenship and Internet safety training for all staff.

These topics are discussed in more detail in Appendix B (BYOD Considerations) and a sample acceptable use agreement is provided in Appendix C.

2.3 Parental and community support are also critical to a successful implementation of BYOD. The rationale behind BYOD needs to be clearly communicated to parents and community, and they need to be given the opportunity to provide feedback. There should be a provision for parents to opt out of their children's participation in BYOD. Such parents will need to be reassured that students who do not have devices of their own or whose parents request that they not participate in BYOD will not be penalized in any way.

Parents should be informed of the learning platform that students will be using (eg. GoogleDocs, Edmodo, D2L) and of the minimum requirements for a device to provide access to the learning platform. Parents also need to be informed of the students' responsibilities when it comes to acceptable use and security of personal devices at school. As soon as it has been developed, the updated Acceptable Use Agreement should be shared with parents.

Principals may want to consider providing all of the above at an open house where the benefits of integrating technology into classroom instructional practices may be showcased.

3. Permitted Uses of Personally-Owned Devices

3.1 In order to maintain the security and integrity of the Board's Wide Area Network (WAN), **personally-owned devices may be connected only to the AMDSB Guest wireless network**. **Personally-owned devices are not permitted to connect directly to the Board's network via an Ethernet cable.** It is the device owner's responsibility to ensure that security patches and anti-virus software for the device are up-to-date. Devices that are deemed by the IT Department to pose security risks to the network may be prevented from connecting to the network.

3.2 The IT Department reserves the right to control (throttle) bandwidth for personally-owned devices in order to ensure adequate access for all devices and to control costs.

3.3 Students and staff are permitted to use personally-owned devices during instructional time in AMDSB sites for educational purposes. Such purposes include, but are not limited to:

a) research and information gathering,
b) the creation of documents, presentations, artwork, music, video, and other media to fulfil learning expectations and demonstrate understanding,
c) for education-related communication through email, messaging, online conferencing, etc.,
d) for the transfer of school work in electronic format between personal and school accounts, and/or to submit school work in electronic format to teachers, and,
e) for collaboration with others for educational purposes.

3.4 School principals will be responsible for determining the readiness of the school to implement BYOD opportunities and will inform the school community when implementation will occur. Classroom teachers, in consultation with their principals will determine the extent to which students will be permitted to use their own devices within the classroom. The opportunity to do so, however, should not be unreasonably withheld.

3.5 The opportunity to "bring your own device" is a privilege extended to students and staff of the Avon Maitland District School Board for the purpose of enhancing the educational experience for students in support of student achievement. **This privilege is not intended for personal entertainment and other activities of a personal nature.** Students and staff are expected to comply with the school and

Board codes of conduct, AP 140 Computers Acceptable Use and Security, AP 320 Use of Internet and Electronic Devices by Students, and AP 190 Copyright.

3.6 During non-instructional time, personally-owned devices may be used by students for personal purposes subject to the conditions outlined in AP 320 Use of Internet Electronic Devices by Students and provided that the use of the device does not result in excessive bandwidth consumption (as determined by the AMDSB IT Department.)

4. Student Responsibilities

4.1 Students under the age of eighteen (18) must provide proof of parental permission to bring their personally-owned devices to school.

4.2 Students are responsible for learning how to connect their devices to wireless networks, for understanding how their device functions, and for downloading or installing any apps or programs that they need to use their devices for school purposes.

4.3 Students are responsible for the security of their own devices while they are being used at school. This means taking appropriate steps to identify the device (i.e. record its serial number, inscribe a name on it, etc.), to provide a secure way to transport the device to and from school, and to ensure that the device is kept in a secure manner or location when not in use in the classroom.

4.4 Students are required to comply with the expectations of the classroom teacher regarding when, where, and for what purpose personally-owned devices may be used in the classroom.

5. Parent/Guardian Responsibilities

5.1 Parents/guardians are responsible for ensuring that their son/daughter is mature and responsible enough to bring a personally-owned device to school and to use it appropriately. For students under the age of eighteen (18) written permission for BYOD must be provided by the parent/guardian annually.

5.2 Parents are responsible for ensuring that the device is functioning properly, contains the necessary apps or software to be used at school, and that their son/daughter knows how to connect to a wireless network and understands how to use the device.

5.3 Parents are responsible for making any necessary repairs to the device and to ensure that it is free of viruses, malware, spyware, etc. and that security patches are up-to-date.

5.4 Parents need to be aware of school and Board expectations for the use of personal devices and aware of teachers' expectations for classroom use of personal devices to ensure that their son/daughter complies with these expectations.

6. School Responsibilities

6.1 The school and/or classroom teacher will be responsible for informing parents/guardians and students when, where, and how BYOD will be implemented.

6.2 The school and/or classroom teacher will ensure that written consent has been provided by parents/guardians for students to bring their own devices to school.

6.3 The school and/or classroom teacher will work with students to choose the apps or programs that will work best on their devices.

6.4 The school and/or classroom teacher will provide instruction to students on how to use the selected programs and on appropriate and inappropriate use of technology in the classroom.

6.5 The principal and school staff will determine suitable consequences for inappropriate use of personally-owned devices, in keeping with the expectations of AMDSB Administrative Procedures and school and Board codes of conduct. The school will also be responsible for communicating expectations to staff, students, and parents.

6.6 Staff may use personally-owned devices for personal use during breaks, at lunchtime, and during preparation and marking time, provided that the usage is compliant with AP 140 Computers: Acceptable Use and Security and provided that the use does not result in excessive bandwidth consumption (as determined by the AMDSB IT Department.)

7. The Responsibilities of the IT Department

7.1 The IT Department will work with school principals to evaluate school readiness for BYOD in terms of wireless access. The IT Department will make recommendations as to the number of access points needed and the appropriate location of access points for sufficient connectivity. The IT Department will also install access points and provide staff with instructions on how to connect. Principals are asked to keep in mind that the installation of additional access points will be required as more and more devices become connected to the wireless network.

7.2 The IT Department will monitor wireless network traffic to eliminate bottlenecks and make the system as efficient as possible. As new management technology becomes available, the IT Department will work to continuously improve the functionality of the wireless network.

7.3 The IT Department will notify school principals of any activity by a student or staff member that may compromise the integrity and security of the network. Network access may be suspended or removed altogether for individuals who use the wireless network inappropriately.

7.4 The IT Department will provide a list of basic troubleshooting tips for connecting to the network and will assist in identifying connectivity issues. **However, the IT technicians and TRAs will not perform diagnostics, repairs, or updates on personally-owned devices.**

7.5 The IT trainers will provide staff training on programs recommended for use by the IT Department, Program Department, and Learning Services. A list of such apps and programs will be developed by the IT trainers, Program and Learning Services Departments and will be shared with schools. The IT trainers will consider apps or programs recommended for use by teachers, but they cannot support all apps and programs available for use online.

8. Review of BYOD Administrative Procedure

8.1 Due to the frequent changes occurring in technology, usage, and wireless networking, this Administrative Procedure will be reviewed annually by the Principal of Information Services and the Program Council to ensure that it is updated to meet the changing needs of our students, staff, and schools.

Appendix A

BYOD Readiness Checklist

- ○ Pedagogical Readiness – has BYOD been discussed with teachers and a rationale developed for the implementation of BYOD?
- ○ Have teachers discussed how BYOD will change classroom instructional practices and assessment?
- ○ Is the staff supportive of a BYOD implementation?
- ○ Has the parent community been consulted and are they "on board?"
- ○ Are there plans in place for communicating to parents the rationale for BYOD and an explanation of how students will be using their own devices in class?
- ○ Are plans in place to put information about BYOD on the school website?
- ○ Teacher Readiness – are there teachers on staff who are ready and willing to implement BYOD?
- ○ Logistics – have teachers determined when, how often, and for what purposes students will be able to use their own devices in class?
- ○ Has the staff discussed and reached consensus on when and where students may not be allowed access to their own devices?
- ○ Do teachers have the resources necessary to teach digital citizenship and has a plan been developed for teaching it?
- ○ Has a "platform" or program that will work on various devices and operating systems been implemented for students to use?
- ○ Have provisions been made for students who do not have a device of their own, who may lack Internet access at home, or whose parents may not have consented to BYOD?
- ○ Have parents been advised of the User Agreement that they and their children will have to sign when BYOD is implemented?
- ○ Has consideration been given to where student-owned devices will be kept when not in use (eg. at lunchtime, recess, phys-ed class, etc.)?
- ○ Are any changes required to student behaviour plans or the school's code of conduct?
- ○ Have specific areas of the school been identified where BYOD will occur?
- ○ Has the IT Department conducted an assessment of wireless network readiness?
- ○ Has consideration been given as to how the effectiveness of BYOD will be assessed?
- ○ Is there a mechanism in place in the school for the sharing of best practices around BYOD?
- ○ Will there be additional school costs associated with BYOD? (App purchases, teacher devices, online subscriptions, wireless printers, additional access points, etc.)?

Appendix B

Considerations Prior to Implementation

Rationale for the Implementation of BYOD

The prospect of letting students bring their own devices to school will be a daunting one for many teachers and parents who will have legitimate concerns that the technology may be a distraction and may be used inappropriately be some students. There needs to be a sound rationale put forward, outlining how student-owned devices will enhance student learning by providing immediate access to information and opportunities for collaboration and creativity that would not exist to the same degree without the availability of student-owned devices. Teachers and principals who wish to implement BYOD would be well-advised to research the topic and develop a well-reasoned, comprehensive rationale for BYOD.

Time Frame for Implementation

Careful consideration should be given to how and when BYOD will be implemented. A good first step would be to ensure that there are teachers on staff who are ready to implement BYOD, who have planned instructional strategies and classroom activities that will enable students to make effective use of their devices. If there is not purposeful use, then the technology will very likely become a distractive influence. And if opportunities are not provided for students to use their technology in class, they may stop bringing it to school. Teachers need to have clear expectations of when the devices may be used and they need to develop cues or signals telling students that it is time to put away the device and re-focus their attention on the teacher. Teachers need to be prepared to deal with non-compliance and to have developed a clear understanding with their students of the consequences for non-compliance. Parents need to be informed of this as well.

A good first step might be to designate one day a week where students can bring their own devices to class or to start with a class project for which they can use their own technology. Most successful implementations of BYOD have started with small steps and then increased the frequency of BYOD use. The age of the students should also be considered when determining where, when, and how often BYOD should occur.

Changes in Pedagogy and Assessment Practices

It is probably fairly obvious that one of the major considerations in implementing BYOD is how instructional and assessment practices need to change. How will classroom practices need to change if students have immediate access to information? How will assessments need to change if students have access to information? A good starting point would be to examine SAMR model, which looks at how technology integration changes teacher practice.

Designation of Online Platforms

One of the big challenges with BYOD is that students will potentially have a wide variety of devices, with different operating systems. It will be difficult to find apps or programs that will work on all devices and so the use of online (Web 2.0) programs should be considered. Before implementing BYOD, teachers should research and test out some of the many programs out there to find one that best suits their needs. It might be a blog, a wiki or an online learning management system like Edmodo, GoogleDrive or D2L. Consultation with other teachers and with the IT trainers is strongly recommended.

Support for students who don’t have Devices

This can be a difficult issue depending as there will no doubt be students who don’t have access to a device of their own or whose parents will not permit them to bring a device to school. The best solution is for the school to have additional devices available for students to use in class. It goes without saying that we cannot require students to have a device or require them to do their work in an online environment unless we make appropriate arrangements for students who don’t have their own devices. This may mean alternate activities and assignments or at least a choice of assignments, some of which do not require technology and it is probably a good idea to periodically have assignments that all students must do without the use of technology. We must be careful that technology not become a vehicle for stigmatizing students.

A Communication Plan to Inform Parents

The rationale for BYOD and the plan for its implementation needs to be clearly communicated to parents in order to explain the rationale behind BYOD and to gain their support for the initiative. This can be done in a variety of ways and a multi-faceted approach is probably best. Before a BYOD implementation is announced, consultation with School Councils and with parents generally is advisable. There should be discussion at a School Council meeting and feedback from parents should be solicited. Feedback may be requested through newsletters, at open houses, and at parent-teacher interview time, for example. When the school is ready to implement BYOD, those same methods might be used and the plan should be posted on the school website.

Professional Development

As with any new initiative, teachers will need support and encouragement in order to achieve success. While there are all kinds of resources online regarding BYOD, connecting teachers with other teachers within the school and the Board is strongly recommended. Teachers should be encouraged to share best practices and to create their own personal learning networks by connecting with colleagues who are also implementing BYOD in their classrooms. There are many websites and social networking opportunities for teacher collaboration and teachers should be encouraged to seek these out and take advantage of them.

Updated Acceptable Use Agreement

An updated Acceptable Use Agreement is attached to this Administrative Procedure. School principals and their staffs should review it and review their own student behaviour rules and codes of conduct to see if these need to be updated.

Digital Citizenship

As students do more and more work online, digital citizenship becomes critical. Not all students intrinsically understand what is appropriate and what is not and we have an obligation to teach them digital citizenship if we are going to expect them to learn in an online environment. There are all kinds of resources available online to assist teachers in teaching digital citizenship, but it is important to choose resources that are suitable for the age and experience level of the students. Most resources for digital citizenship are “universal” in nature but some do make reference to rules and laws; so care must be taken to make sure that they are relevant to Ontario and Canadian circumstances.

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Appendix C
Bring Your Own Device
Student Permission Form

In recognition of the fact that technology plays a significant role in the lives of students today and that many students would prefer to use their own computing devices at school, the Avon Maitland District School Board has implemented a Bring Your Own Device procedure. Parents/guardians who wish to allow their child to use a personally-owned device at school must sign this form, agreeing to the conditions stated below. **This agreement provides access only to the school's wireless network. Personally-owned devices may not be connected directly to the school's Ethernet network (i.e. by means of a cable.)**

Conditions for use of personally-owned computing devices at school:

1. The student must take full responsibility for his/her device and ensure that it is kept safe and secure at all times. While the school will make reasonable efforts to prevent theft, loss, or damage, the school and Board are not responsible for the security of personally-owned devices.
2. The student and his/her family are responsible for ensuring that the device is in good working order and is free of viruses, worms, spyware, malware, etc.
3. During class time the device is to be used for school purposes only. Access to the Board's wireless network is granted for school work, not for personal purposes. Outside of class time students may use their own devices for personal purposes as long as the activities are appropriate and do not contravene school and Board codes of conduct and as long as the activities do not consume excessive amounts of bandwidth (eg. downloading games, watching movies, online gaming, etc.)
4. The school and Board reserve the right to limit bandwidth access for personally-owned devices to amounts deemed by the Board to be reasonable for the completion of school and classroom activities.
5. Use of a personally-owned device is at the discretion of the school principal and classroom teachers, who will advise students when it is acceptable to use their own devices in class.
6. The use of a personally-owned device during class must not be a distraction to the student who owns the device or to other students in the class. Students must comply with teacher requests to close or turn off the device.
7. Personally-owned devices must be brought to school with a sufficient battery charge to last for the day. While it may be possible for a student to plug his/her device in for re-charging, the school will not guarantee access for re-charging.
8. **Personally-owned devices may be connected to the AMDSB Guest wireless network only.** They may not be connected to the secure wireless network or hard-wired to the school and Board Ethernet network.
9. The school/Board reserves the right to inspect and/or confiscate any personally-owned device if there is reason to believe that it has been used for inappropriate purposes, may contain inappropriate content, or may pose a security risk to the Board network.
10. Personally-owned devices must not be used to capture pictures or video of students, staff or visitors, except for the purposes of class work under the supervision of the classroom teacher and with the written permission of the parents/guardians of those whose images or voices appear in the images or audio recordings.
11. Violation of any of these conditions or any other school or Board rules involving a student's personally-owned device may lead to a loss of computer network privileges and/or other disciplinary actions consistent with school and Board codes of conduct and behaviour expectations.

Student Acknowledgement

I have read and understand the conditions stated above. By signing this document, I agree to abide by these conditions and understand that a violation of these conditions could lead to a loss of the privilege of using my own computing device at school and to additional disciplinary action by the school or Board.

____
(Student Name)

________________________________ __________________________
(Student Signature) (Date)

Parent Acknowledgement

I have read the conditions stated above and have discussed them with my son/daughter. By signing this document, I am granting my son/daughter permission to bring his/her own device to school to be used for classroom purposes. I understand and have explained to my son/daughter that failure to abide by these conditions may result in the loss of the privilege of using a personally-owned device at school, and in the case of serious infractions, other disciplinary action that may be taken by the school or Board.

____
(Parent Name)

________________________________ __________________________
(Parent Signature) (Date)

Identification of Personally-Owned Device

Type of Device (laptop, netbook, iPad, etc.) __________________________

Make (Apple, HP, Dell, etc.) __________________________

Model __________________________

Serial Number __________________________

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Appendix D
Bring Your Own Device
Staff User Agreement

In recognition of the fact that technology plays a significant role in schools today and that many staff would like to use their own computing devices at work, the Avon Maitland District School Board has implemented a Bring Your Own Device procedure. Staff who wish to use a personally-owned device at work must sign this form, agreeing to the conditions stated below. This agreement provides access only to the school and Board wireless networks. Personally-owned devices may not be connected directly to the school and Board Ethernet network.

Conditions for use of personally-owned computing devices at school:

1. The staff member must take full responsibility for his/her device and ensure that it is kept safe and secure at all times. The school and Board are not responsible for the security of the device.

2. Staff members are responsible for ensuring that the device is in good working order and is free of viruses, worms, spyware, malware, etc.

3. The device is to be used for work purposes only during the work day. **Access to the Board's wireless network is granted primarily for work, not for personal purposes.** However, during breaks and at lunchtime, staff may use their own devices for personal purposes as long as they are compliant with AP 140 Computers: Acceptable Use and Security, and as long as the use does not consume excessive amounts of bandwidth.

4. The school and Board reserve the right to limit bandwidth access for personally-owned devices to amounts deemed by the Board to be reasonable for the completion of employee's assigned tasks.

5. Personally-owned devices that have been used inappropriately or that may pose a threat to the integrity and security of the network will be removed from the network. Staff will be required to work with the IT Department to resolve the issue before network access is restored for the device. However, the IT Department will not do repairs or maintenance on personally-owned devices.

6. Personally-owned devices must not be used to capture pictures or video of students, staff or visitors, except for the purposes of work and with the permission of those whose images or voices appear in the images or audio recording.

7. Violation of any of these conditions or any other school or Board rules or expectations may result in the loss of the privilege of using a personally-owned device at work.

I have read and understand the conditions stated above. By signing this document, I agree to abide by these conditions and the expectations of AP 140: Computers Acceptable Use and Security.

____
(Employee Name)

______________________________________ ______________________
(Employee Signature) (Date)

Device Identification

Type of Device ______________________________

Make/Model/Serial Number ____

Please return the completed form to your supervisor/principal.