



Leysin American School Middle School Technology for Education Recommendations

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Introduction:

The original proposal was as follows:

“A strategic plan for implementing a positive culture towards the use of technology in LAS’s middle school”.

Overall the culture of technology use at LAS is becoming a priority for development but without a clear strategic plan it will be difficult to implement. As LAS seeks to integrate a middle school into our current structure the Middle School will be ideally situated to receive the result of this research, but with implications for the larger institution. Such is the nature of a boarding school, the use of technology could apply to all aspects of life but this proposal will pertain to the academic day with a recommendation to consult with the residential life team for a consistent approach. At it’s core the strategic plan will include:

- guiding statements for the purpose of educational technology
- an Acceptable Use Policy (AUP)
- a policy that explains the expectations of technology for learning for students and faculty
- models of pedagogical best practices regarding technology in the classroom
- an analysis of the tools required to achieve the Middle School’s goals.

Process

Stage one - consult the Leaders of the academic program (Paul Magnuson & Patricia Cooper) for needs and scope

Stage two - research current best practise and gather LAS consensus.

Stage three - draft a series of recommendations

Stage four - consultation stage, share the proposal document with stakeholders for comment. This should particularly include the residential life team

Stage five - finalise proposal and develop and implementation strategy with the Director of the Middle School



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Summary

Much of what is written below pertains to policy, however on a school wide level we should consider the curriculum and aspects of cyberbullying, online safety, digital footprints and digital citizenship. An opportunity for horizontal alignment will occur if we consider the academic uses of technology in terms of research, writing and publication and the libraries should be consulted whenever using technology in the context of the library.

Recommendations

- Build into the curriculum an opportunity to follow the principles of Wolfram (Wolfram, 2010) and Zhao et al. (2016) and this will require training and material support. This can be summarised by the title of Zhao's (2016) book "***Do not send a human to do a machine's job***"
- The following quote (perhaps mistakenly) is often attributed to Albert Einstein "***The computer is incredibly fast, accurate, and stupid. Man is incredibly slow, inaccurate, and brilliant. The marriage of the two is a force beyond calculation***". Consider how we can apply that in our teaching in the Middle School.
- Incorporate elements of November Learning's hierarchy of tech integration found [here](#)
- Develop protocols and access to learning with **Blended Learning models**
- **Reaffirm** the importance of social interactions and the removal of technology where distractions can occur, but the tools should always be available to teachers and students when needed
- Evaluate the non academic curriculum to assess for the efficacy of our support in terms of cyberbullying, online safety, digital footprints and digital citizenship. Possible sources of information on [Common Sense Media](#)
- **Determine the software** required on the devices available. This can be done through a simple survey of the teachers intended for the MS
- Operate a system of 'itunes cards' so that students are given the funds required to download the apps.



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Teacher Professional Development for Technology Use

Current Model

- New faculty are given training in tech tools and support for Google Apps. The training is flexible but typically includes MM, PS and Google Apps for Education
- Returning faculty are given the opportunity to self-direct ed-tech learning with peer support.
- Annual opportunities to attend an Apps Events conference.

Discussion

The level of support for new faculty is as good as time allows and as much as possible follows the principles of ongoing, situated in practise, and self-directed but scaffolded learning. What is currently lacking is an institutionalised coordinated conversation that impacts learning by using technology. There is little discussion of the SAMR model, TPACK, ISTE standards, Technology Integration Matrix (TIM) Matrix, Unesco's tech integration [model](#), November Learning's five stages of technology use, or [GESCI](#) ICT Competency Standards for Teachers. With so many tools available to begin a discussion about appropriate technology use it would seem appropriate to choose a model and start the conversation.. A recommendation for which tool to use might fall outside the scope (or job description) of this LASER project but an appropriate related recommendation will follow. [November Learning's](#) model is an example that is easy to interpret.

Recommendations

- Teachers in the middle school should be expected to communicate and use the designated platform for learning management, Google Drive, Google calendars, and Gmail. This expectation should come with support for learning the platform over time and should be built into the working day.
- A balance should be struck with all the competing topics for conversation and priorities should be stated by the Academic Director.
- In collaboration with the Director of Technology, the Academic Director, informed by the current practice of future middle school teachers, should decide on a model that the MS (or whole school) can follow in terms of technology integration and standards for teachers.
- The appraisal for teachers should refer specifically to a section that allows for reflection on technology use and development and can be aligned with any of the integration models or professional standards.
- Develop tech tool ambassadors, similar to the model developed with faculty who attend an Apps Event conference, within the Middle School.
- Develop student ambassadors for technology implementation and ideas in school.



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Behaviour & Culture

This paragraph, taken from Swallow (2015), illustrates the negative aspects of technology that relate to behaviour. What is particularly good about this piece is that it considers the second year of technology implementation, looking beyond the enthusiasm of a newly implemented program.

Looking at recent research on 1:1 initiatives bounded by a limited amount of time, data highlighted similar patterns of negative experiences. Cullen et al. (2014) found that although teachers were initially enthusiastic about 1:1 classroom tablets, by the second semester teachers criticized the freedom technology allowed students, and the associated classroom distractions. Storz and Hoffman's (2013) research on a 1:1 middle-school computer initiative highlighted classroom changes in teacher pedagogy, student learning experiences, classroom behavior, and communication. Although findings indicated generally positive experiences, during the second round of data collection students had mixed opinions. More technology resulted in "laziness" (p. 9), "learning less" (p. 9), and "off-task behavior" (p. 10).

Looking closely at a Middle School Study by Storz and Hoffman (2013) reveal a similar pattern to the experiences of teachers at LAS, [documented in research](#) leading up to the creation of LASER Students find it difficult to manage the distractions of their computers and cell phones and as a school we should create a policy that pro-actively promotes positive technology behaviour. This is of course easiest in Fall 2016 with cohorts of students all entering LAS for the first time, i.e. 7th and 8th graders, or the middle school population.

Current Model

- Number of different policies for managing technology, including zero technology permitted, leave at the door policies, 1 chance then removal, and more.
- Many teachers operate on the philosophy of 'professional points' embedded in academic grades, as a lever for punishing inappropriate use of technology.
- Occasionally phones have been taken away for the day.
- Teachers allow music under different policies.
- LAS has a broad AUP on pages 49-51 of the student handbook.

Discussion

Some authors discourage the use of the academic grade as a mechanism for managing behaviour (O'Connor, 2011). Indeed, the middle school assessment philosophy is that academic grades reflect the academic content - not other factors like attendance or behavior.

LAS does not operate a largely punitive approach to behaviour, thus it would be inappropriate to consider infractions (or similar). However some consequences might be beneficial, these may relate to an alternative reporting/monitoring system for 'negative behaviour'. This may be in the form of monitoring the aspect of the mission statement relating to responsibility with students being periodically rewarded as they demonstrate positive behaviour, which could include technology use. Some schools require students to use their computer for academic purposes only, additionally students are not allowed to use chargers in class as it is said the macbook can last the whole school day if it is being used for academic purposes. This philosophy does not align with LAS's liberal nature.

It is not widely believed that we need a device monitoring system beyond that which already exists



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(LANSchool). This is evidenced in the numerous conversations that have happened during focus groups and technology PD workshops. There is consensus that we need to tackle responsible use of the device as it forms an important tools for learning and safety.

It has been noted that our lockdown procedure relies on SMS for information dissemination. This should be considered.

In terms of **culture** there have been occurrences of students falling victim to cyberbullying, sextortion and exclusion. This should form part of the wider curriculum and the placement of such can be determined by the academic director of the program.

It is not uncommon to see students who, although physically close, are not interacting as they are engage in a game on their iPhone or Macbook. It should be noted that there can be a difference between playing a game in isolation and as a group. To combat this, ISL (Lausanne) do not allow headphones on campus. Thom Paddick has seen success in 'Tech-no Wednesday,' where students are rewarded for interacting without technology.

It is very difficult to find definitive research and ed-tech recommendations that fit the nuances of every school. Strategies below represent opinion having consulted literature and colleagues

Recommended

1. **Students should leave technology in a designated space** as a matter of routine. This should include lunch and break periods to promote a positive interaction culture.
 - This should be aligned with a residential life policy so that there is controlled and reasonable access to technology during the day.
 - Time should be built into the day for students to email, create appointments, sign up to events or conduct other administrative tasks.
 - Students should be encouraged to talk to teachers face-to-face where possible, especially if the teacher is in the Middle School building.
2. Teacher can request that students keep their device, but should consider only one device and where appropriate use only one device per group. This will improve the communication process.
3. So as not to impede the learning process with a 'draconian' approach, students should be allowed to request the use of one of their devices, under these conditions:
 - Why do they need to use the technology?
 - What will 'done' look like once they have completed their tech involved task?
 - Return the device when finished
 - Negative use of technology is recorded or those **consistently using technology positively are rewarded**
4. **No headphones on any person during the school day.** This should happen without exception to promote a culture of interaction and the headphone should be left in the dorm. This does mean that the MS will need to purchase classroom sets to:
 - Allow for the watching of videos in class
 - Possibly, as a reward, students may be allowed to listen to music. This should not be considered the norm as is currently.
 - Music listening should be discussed by MS teachers to reach consensus. A consistent approach to this (such as Friday afternoon only) will help policy implementation.
 - This is not an uncommon approach (Selwyn and Bulfin, 2015)
5. MS Director should consider the impact of no technology on the Lockdown SMS procedure. *Important to note that phones on silent, turned off or confiscated currently have the same effect hence this is not a very large shift from current practise.*



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6. *Develop any additional rules collaboratively. For [example](#)*

Summary

These recommendations form a simple AUP, all technology use is meant to enhance teaching and learning. Additionally these recommendations will promote positive behaviours in the MS. *The scope of this AUP does not extend to elements of e-safety, cyberbullying and 'netiquette'.*

These recommendations will need to be communicated effectively to students and teachers, including coverage in the student handbook, with expectations reinforced for both. Consistency is key so that students do not gain emotional leverage, however academic leverage should be encouraged. The Director in collaboration with the teachers could consider developing a student developed [AUP](#) for outside of the Academic day (within the above regulations), alternatively the rules should be posted and visible in classrooms.



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MS Technology Requirements

The technology requirements of the MS are complex, involving multiple departments and individuals. Currently the campus store manages the iPhone distribution with no capability for pushing out apps and software. There already exists a mechanism for teachers to request software for the macbooks that students receive. There is no request from teachers of the middle school to buy or to standardize with technology beyond that which currently exists at LAS (macbooks and iPhones). Teachers use multiple platforms for disseminating information and collecting assignments. PS remains the only school requirement in this area and as such is widely used for reporting grades.

Recommended

1. Determine the software and tools required and disseminate a list to students on day one
2. Have students purchase and setup all devices in line with the life skills [curriculum](#) developed by Ben Hall. This includes software required on the macbook and iphone. This includes functionality of email, calendars and drive etc
3. Operate a system of itunes gift cards for the procurement of paid software on the iPhone
4. Faculty receive the same tools to teach with as the students will learn with (i.e. iPhone)
5. One common mechanism for communication and reporting homework should be agreed on, even if a temporary Google Classroom platform is adopted.

Training and Tools

Currently the students set up their computers in their core classes, and there is little collaboration to ensure students know exactly where and how to access required tools. Students and faculty will need support for technology and a minimum standard should be expected by teachers and students. A common ground just be created that allows teachers to post homework and communicate in a way that they are comfortable. Once an LMS is rolled out this will help. On going tech support is available currently.

Recommended

1. Require faculty to operate at the same level as students when using calendars, mail and google drive.
2. Encourage more face to face conversation rather than digital
3. Provide ongoing support for Google Tools and other Technology tools for teachers
4. Operate a sharing and innovation session for teachers developing new activities with technology.
5. Develop a system that allows IT to manage iPhones just as is done with the macbooks.

LMS (On Hold)

An Learning Management System (LMS) is way to extend the classroom into the cloud to deliver content, messages and assignments. An LMS is an evolution of Content Management System (CMS) and they share many of the same features, but the definitions are now merging into one. Many schools are using 'mash-ups' as an e-learning presence, it is not uncommon for a teacher to have a website to host content and to have students on their LMS to facilitate communication and organisation. In addition to these solutions schools host their students information (grades, classes/courses & personal information) on a



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School Information System (SIS) such as Powerschool or our proprietary system Magic Mountain.

Current Model

Current examples of an LMS at LAS are Edmodo and Google Classroom

Edmodo and Google Classroom do not offer enough functionality (see below) to mandate a switch.

Teachers operate multiple sites on different platforms with a different school image.

It is not currently clear where teachers, students or parents should go to access information.

Discussion

- The courses on offer require that our LMS is able provide content built into the LMS so that teachers and students can see what is available.
- Our outdoor and mobile learning requirement suggest an iPhone or iPad app will be useful
- We need to decide how we host content on a website opposed to linking into the LMS as the official communication portal.
- An LMS that integrate with [powerschool](#) is preferable (such as Blackboard, Canvas, Haiku or Schoology)
- An LMS that allows parental communication should also be considered
 - This can alleviate the frustration of a number of emails & marking period comments.

LMS Reviews

- [ISD](#) have completed an LMS review and concluded schoology to be the best solution.
- LAS Canvas process [review](#)

LMS Desired Functionality

- All communication of grades and homework in one place accessible by students, parents and all teachers
- Single Sign On, tied to google login and password.
- Bidirectional communication with PowerSchool
- Parental access

Websites

Teachers frequently build and operate websites which serve a different purpose to an LMS. It is possible to use a website in conjunction with calendars, messaging tools or drive to operate in a similar manner to an LMS, but typically it is at reduced functionality and with an arbitrary process.

- Consider what is hosted on websites in the middle school and the style/design of each website.
- Consider how we communicate with parents,
- Fixed documents, static documents and one direction messages are best suited to websites
- Websites work well for digital portfolios and we should consider how we can be 'outside' of the institution in terms of [content](#)

LMS Candidates

Schoology



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- Parental [functionality](#), Advisor functionality, mastery learning, student workload analysis, integrated with google drive.

Canvas

- [Review](#)
- [Notes](#)

Blackboard

Rejected

Haiku (no iphone app), Firefly, Managebac, Moodle given the ISD [review](#)

Google Classroom and Edmodo are not feature rich. Edmodo cannot be centrally managed and does not communicate with Powerschool.

Recommended

- At this stage instructions have been received to cease investigating the approach to deciding on which LMS platform to use. The initial information remains so in the case of the MS the recommendation holds that teachers decide on a common platform for reporting homework, grades, assignments and academic communications. IT Director at LAS is likely to take leadership of this.



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