SmartClass+ BY ROBOTEL

WHITEPAPER

LANGUAGE LABS DEMYSTIFIED

WHY USE A LANGUAGE LAB?

In a world where “globalization” and “cultural diversity” are becoming part of our daily lives, it is easy to understand why learning a second language – or even a third language – is becoming increasingly important.

The best way to learn a new language is to move to a foreign country where the target language is spoken and immerse oneself in the local culture. Alternately, one might hire a one-on-one expert tutor.

For most of us, and certainly for most students, these options are luxuries that are economically unattainable. The reality for most schools is that language teachers must work with classes of 20 to 30 students – or even more. Statistically, in such an environment, each student speaks for less than 20 seconds for every hour of class time.

Learning a second language is very much like learning to play a musical instrument. There is certainly merit in studying the theory, but the major way to improve virtuosity is through practice. The more a student practices, the more proficient he or she becomes.

Speaking for only 20 seconds per class cannot possibly develop a student’s language communication skills.

TECHNOLOGY AMPLIFIES COMMUNICATION OPPORTUNITIES

So, how can educators overcome these conflicting needs for larger class sizes and more student speaking practice?

Progressive schools are turning to technology to help teachers manage their classes and assure that their students have sufficient opportunities to practice and hone their listening and speaking skills.

Language learning platforms enable teachers to assign in-class activities, such as *conversation pairing* and *recording,* where all students are able to speak concurrently. And self-study recording activities can also be assigned as homework to further increase practice time.

If students participate in these activities for only ten minutes per class, this is already more than a 30-fold improvement over the statistical speaking limit of 20 seconds per class!

STUDENT-CENTRIC LEARNING MODEL

Twenty-first century educators are embracing a student-centric approach to learning. This approach incorporates the following characteristics):

- Student-centered instruction
- Multi-sensory stimulation
- Multi-path progression
- Multimedia delivery
- Collaborative work
- Information exchange
- Active/exploratory/inquiry based learning
- Critical thinking and informed decision making
- Proactive/planned response
- Authentic, real-world context

International Society for Technology in Education (ISTE)
National Educational Technology Standards (NETS)

"Multimedia", "Collaborative work", and "Authentic, real-world context" are in fact the key capabilities that we use to describe a modern digital language lab. These capabilities are highly motivating for today's tech-savvy, iPad-toting students.

LANGUAGE LEARNING ACTIVITIES

Before exploring our options for deploying a language lab, it is important to first consider the types of activities that teachers might need to assign to their students.

Student activities generally fall into one of two categories; synchronous (or "live"), and asynchronous (or "self-study"). At the university or adult learner level, the focus might be exclusively on self-study, while at the middle school or high school level, there is often a blend of live and self-study activities.

LIVE ACTIVITIES

Live activities are generally done in-class and are managed from a dedicated control panel at the teacher station. Activities might include:

- Teacher presentation
- Model student presentation
- Remote monitoring of student audio (and webcams)
- Remote viewing of student screens
- Student conversation pairing/grouping (with recording)
- Live Testing (including AP and GEPT)

SELF-STUDY ACTIVITIES

Self-study activities are self-contained exercises that students can complete on their own in any sequence. They are generally prepared in advance by the teacher and are assigned to students to work on in-class or as homework.

Activities may focus on any combination of Speaking, Listening, Writing, and Reading – and can also include different types of quizzes. Activities might include:

- Open audio recording (no time limit)
- Audio active comparative recording (repeat after me)
- Simultaneous audio recording
- Open video recording (sign language)
- Simultaneous video recording (sign language)
- Open text
- Question and answer
- Multiple choice quizzes
- Fill-in-the-blanks quizzes

WHAT DOES A 21ST CENTURY LANGUAGE LAB LOOK LIKE?

Fifteen years ago, most language labs used a dedicated room, desktop computers with headsets at each student position, and a master control console at the teacher position.

Many language labs still use this same configuration, however, with the technological advances made over the past 15 years we now have the flexibility of implementing a language learning platform in almost any environment. Consider the following relatively new technologies:

- **WiFi** wireless networking
- **Tablets**
- **Smart phones**

The combination of these new technologies means that both student and teacher workstations can be completely portable – and not tethered to a specific room. Today, we see a growing number of cart-based portable labs.

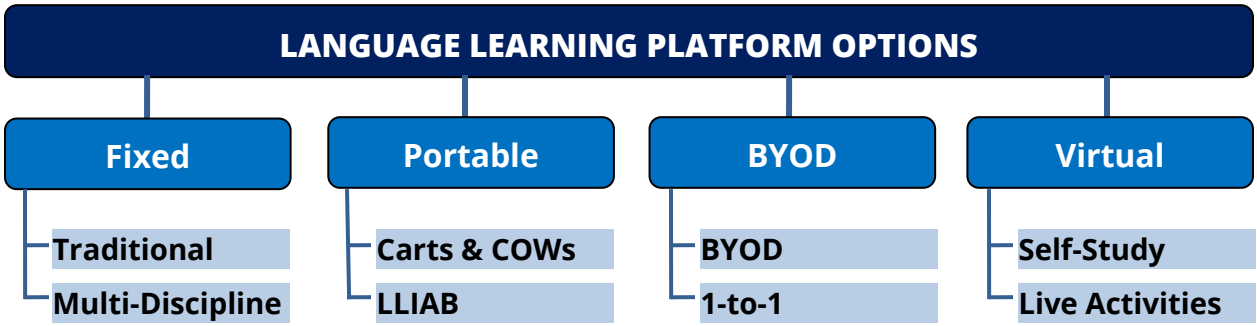
We also see a migration toward **BYOD** (Bring Your Own Device) programs, where students and teachers bring their own workstations to class.

And we see **1-to-1 programs** – where each student is issued a tablet or a laptop upon enrollment.

A 21st century language learning platform embraces **learning at any-time, from any-place, and on any-device**.

LANGUAGE LEARNING PLATFORMS

With modern technologies, there are a wide range of options for implementing a language lab:



FIXED ROOM - TRADITIONAL

Even though we now have a myriad of options for language learning spaces, the traditional, dedicated-room language lab is still the most common environment being used in schools.

Fixed labs offer greater flexibility for platform configuration, as stations can use hard-wired network connections and even a hard-wired intercom for the best sound quality.

FIXED ROOM - MULTI-DISCIPLINE

Multi-discipline labs are fixed labs that teachers use for languages and other subjects. The lab might be used for Math at 08:00, for Spanish at 09:00, and for Computer Science at 10:00. The advantage of this multi-discipline approach is that the language department gets the benefits of a dedicated room without the need to fund the entire budget for the lab. In some older labs, motorized trays are used to raise headsets out of reach of students for non-language classes.

PORTABLE LANGUAGE LAB SYSTEMS

For schools that are unable to use a dedicated room or even a multi-discipline room for language learning, portable systems – that can be wheeled or hauled from room to room – can provide a workable solution.

With a portable system, remember that it takes a finite amount of time to hand-out and collect the devices at the beginning and end of class, so there is some lost productivity. Also, be diligent about having students connect their device to its charger at the end of class, or one will discover the occasional dead device at the beginning of the next class.

The main variations of the portable lab are:

- **Carts & COWs –** Carts typically have a lockable storage area that can hold up to 40 student tablets, 30 student laptops, or 30 student Chromebooks. More sophisticated carts include built-in battery chargers and support for concurrent "synching" of device configurations. The cart may also include the teacher's station, wireless networking equipment, and headset storage.

- **LLIAB (Language-Lab-in-a-Box) –** A language-lab-in-a-box typically does not support individual computing devices. Instead, students use telephone-like *terminals* that serve as a connection point for their headset and include some interactive controls.

BYOD PROGRAMS

Many schools are adopting BYOD (Bring Your Own Device) programs, under which students bring their own workstations to class. Such programs have several potential benefits for administrators, IT staff, and teachers:

- The school does not have to purchase and maintain student workstations
- Students are solely responsible for the care of their devices
- Students have access to their devices – and their electronic homework – outside of class

It is this ***homework*** capability that offers the most benefits for language learning, as it again amplifies the amount of time that students have to develop their listening and speaking skills.

1-TO-1 PROGRAMS

In North America, many schools are migrating towards 1-to-1 programs, under which all students are issued identical laptops or tablets or Chromebooks upon enrollment. The incremental benefits of 1-to-1 programs include:

- There is an *even playing field* with all students having the same device
- The school's IT department role is greatly simplified through supporting a single common type of student device

If you are planning to implement a BYOD system outside of a 1-to-1 program, you will need to consider support for Windows, Macs, Androids, iPads, iPhones, Chromebooks and maybe other platforms. Make sure that students can use BYOD for both live and self-study activities.

VIRTUAL LANGUAGE LABS

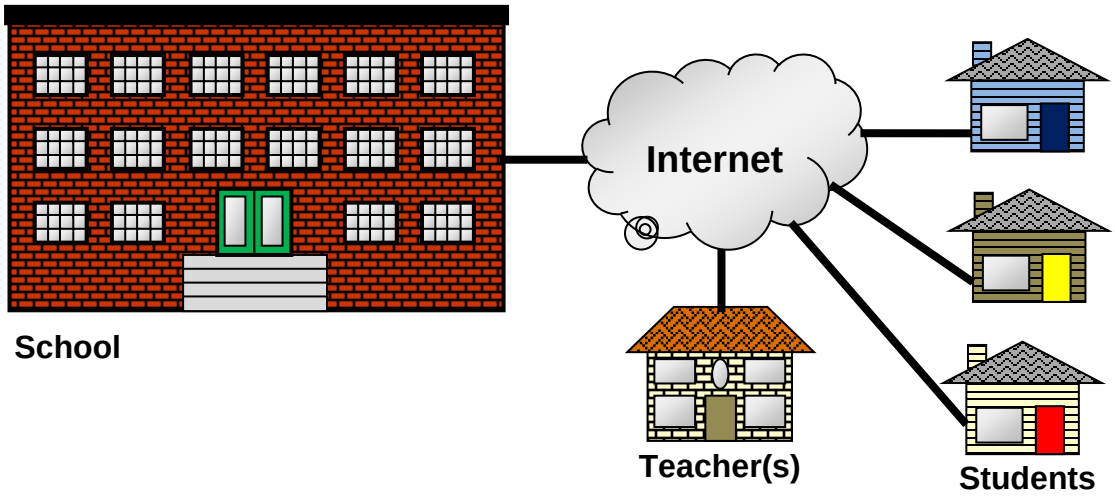
Virtual language labs are functionally identical to traditional language labs, except that teachers and students can all participate and interact from remote locations over the Internet. With a virtual lab, it is conceivable to implement distance learning scenarios and/or on-line homework scenarios.

In configuring a virtual lab, students and teachers will access a centralized *server* that manages the connections amongst users and between individual users and the media library. This server can be self-hosted on the school's premises or it can be cloud-based and located off-site.

Self-hosted implementations offer greater security for student records whilst cloud-based implementations reduce the workload for the school's IT department and potentially offer better security for the school's local area network.

SELF-STUDY – With today's technology, it is common practice to implement a centralized media library that can be accessed from any location by both students and teachers for preparing assignments, working on assignments, and/or grading assignments.

LIVE ACTIVITIES – Software solutions from firms like WebEx and GoToMeeting are routinely used to run live sessions with multiple participants all connecting from remote locations and interacting in real time. However, such solutions do not tend to scale-up very well to support more than a few concurrent users. Current technology is still marginal for supporting 20 to 30 remote students and teachers interacting in real time with one another.



EXAMPLE LANGUAGE LAB ACTIVITIES

Language labs support a very broad range of activities, but let us highlight just a few key examples:

THE APARTMENT (ROLE PLAY WITH OPEN RECORDING)

For this activity, students are connected in pairs, with one student assuming the role of a prospective landlord with an apartment for rent. The second student is a potential tenant looking to rent an apartment. In this scenario, the landlord and tenant are

meeting at the apartment, and each must evaluate the other's suitability within a 10-minute window.

The teacher will orchestrate this activity by organizing the students into pairs. Pairs can be assigned on a random basis, can be hand-picked by the teacher, or partners can be chosen by the students themselves.

The teacher will launch student recorders in Open Recording mode, and will advise students when they can begin.

After completing the 10-minute interview, the teacher will halt the activity and save the recordings for later review and grading.

THE RESTAURANT (MEDIA FILE WITH AUDIO ACTIVE COMPARATIVE RECORDING)

For this activity, the teacher has prepared in advance an audio active comparative recording exercise titled "The Restaurant" using a 2-minute long audio-visual clip of a young couple ordering breakfast in a sidewalk café. The teacher has pre-set the break-points in the video clip where she wants the students to repeat what they have just heard.

The teacher explains the exercise to the students, and then launches this exercise on the student stations. Students work independently, with each student beginning the activity by clicking on his *start* button. The recording will automatically toggle between playback and recording at the end of each segment.

When recording is completed, students can listen to their own track, or they can alternate between the master track and their recording to compare their version to the original.

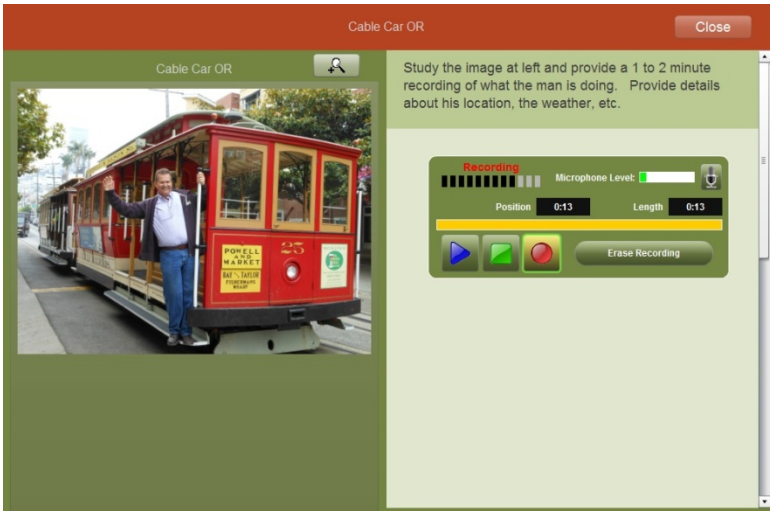
When the teacher ends the activity, student responses are automatically saved. The teacher can then access the student recordings for review in class, from an office, or even from home.

WHAT ABOUT LESSON MATERIALS (CONTENT)?

Language learning platforms are typically provided without a built-in library of lesson materials for the target languages being taught. So, you need to consider if the lessons are going to be sourced independently or developed internally.

LESSON AUTHORING

Most language platforms will include a built-in authoring toolkit that enables teachers to build customized self-study exercises relatively easily. A set of templates is used for creating different types of recording and text response activities. See the example at right.



Exercises use a combination of audio clips, video clips, images, text, and PDF documents as the stimulus. These media clips can be imported from almost any source as long as their use is authorized for educational purposes.

Some systems also enable sharing of exercises amongst teachers – both within the same school and from other schools. This means that the task of developing lessons can be shared.

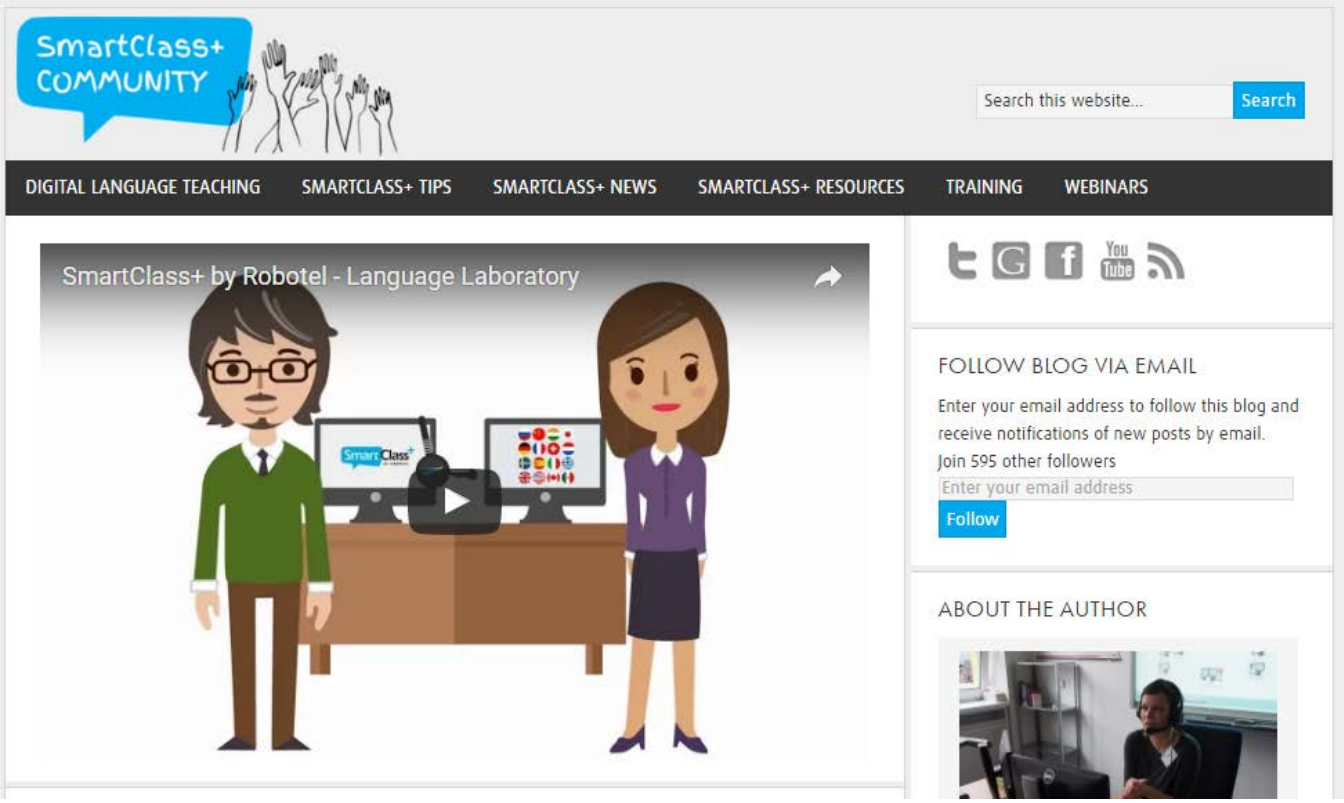
LESSON CONTENT

There are many options for sourcing multimedia materials to build your own lessons:

TRADITIONAL TEXTBOOK PROVIDERS – Most traditional textbook providers now include electronic lesson materials as a supplement to their books and electronic courseware. These materials can often be imported for use with the language lab platform.

THE WORLD WIDE WEB - Over the past decade, a wealth of sharable audio-visual materials in multiple languages has been uploaded to the World Wide Web.

Sites like YouTube (www.youtube.com) and TeacherTube (www.teachertube.com) contain huge libraries of diverse content that can be easily searched to find specific clips relevant to almost any topic.



Consult with our *SmartClass Community* blog site for up-to-the-minute information regarding sources of lesson content, (http://smartclasscommunity.robotel.com/).

ACQUIRING A LANGUAGE LEARNING PLATFORM PROJECT TEAM

If your school is considering the acquisition of a new digital language learning platform, the first step is to assemble a team of project personnel who will research and evaluate the various options. Successful language lab project teams generally include representation from:

- Language teachers
- IT personnel
- School administration
- School district or school board (depending on the project scope)

REQUIREMENTS

The next step is to identify your requirements for the new language lab platform. Don't think of this as a "checklist", as checklists offer little latitude for critical factors like overall ease-of-use – which will be extremely important in getting all of your teaching staff to actually use the system.

Instead, focus on your top 10 requirements, and be very specific and detailed in identifying what you want. At the evaluation stage, each critical capability should be assessed in terms of poor-good-better-best performance and usability. And don't forget teacher training!

KEY POINTS TO CONSIDER

LANGUAGE LAB PLATFORM NEEDS ASSESSMENT	
1	Will all activities be live, self-study, or a mix of both?
2	What activities are critical to you?
3	What activities are nice-to-have?
4	Will the system be fixed, portable, BYOD, or virtual?
5	Will the system be dedicated to language learning or will it be multi-disciplinary?
6	What devices will students use?
7	What devices will teachers use?
8	What type of network will the system use?
9	What is your budget for the system?
10	What is your schedule for installation, training, and commissioning?

DEMONSTRATION

Narrow down your platform choices to a couple of candidates, and then have the prospective suppliers host a live on-line or on-site demonstration for all of your stakeholders. Use this as a learning opportunity to have everyone ask questions and identify potential issues.

If an on-site demonstration is not practical, you might consider using a local trade show as a means to organize a demonstration – but make sure your entire project team is there.

EDUCATIONAL GRANTS

There is usually federal and/or regional educational grant money available for the acquisition of technology by schools. Make sure that you research potential sources for grant money before finalizing your budget for the acquisition of a language lab system. In many cases, available grant money can fund the entire project.

MANAGING EXPECTATIONS

At the beginning of a project, everyone is enthusiastic. There is often an unspoken expectation that a new digital language learning platform will be installed at the beginning of a term, and all teachers will be fully versed in using the system within a couple of weeks.

That may be true for the system's basic capabilities, but you need to anticipate that it will take at least one year, and maybe as much as two years, before the majority of teachers are fully proficient with all system capabilities. Very much like learning a new language, mastery of a language learning platform comes with practice, practice, and more practice.

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