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voice while also retaining

content.

focus on necessary academic

shores. Teams of high school students picked different beaches to advocate for community support to provide care. Students conducted scientific experiments of water quality along the beaches of their community. They determined the format of the final products, such as a calendar with important scientific information, websites, photo essays, and more. Here's a **video** of their efforts.

In Texarkana, Texas, middle school teachers of 12- and 13-year-olds are planning for students to create marketing campaigns for local businesses. The students will research and evaluate the current online presence of a business of their choosing, and then develop a plan and model using social media tools such as **Yelp**, **Urbanspoon**, or **Instagram** to increase awareness of the businesses.

A game company sponsored a competition for players to design new character classes for their virtual world using Minecraft. The design had to include class specifications and a persuasive argument for why the proposal should be included in the game. Over 400 submissions were posted in the first 48 hours! My son researched his competitors' ideas and did four revisions of his based on feedback from his friends before submitting his proposal. He put far more effort and time on this research and writing task than for any school assignment.

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Young people want to be heard. They have ideas and perspective on their lives and the world around them, and when their voice is incorporated into learning, good things happen. In each of the three examples above, students took the lead in choosing and designing their products. Based on their data and audience, they crafted the message that seemed most appropriate to the purpose and that best enabled them to demonstrate academic skills.

There are many opportunities to foster these experiences throughout the curriculum. Project-based learning (PBL) provides one structure that supports this process, as it serves as a vehicle for fostering and developing student voice in ways that matter to them, as well as academically.

# Student voice - an essential element of PBL

According to the Buck Institute for Education, successful PBL should incorporate **eight essential elements**. Student voice and choice is potentially the most powerful essential element. When students decide how they will demonstrate learning, engagement soars, along with their energy and commitment to produce higher quality work.

Include students' interests, ideas, and unique skills as means to create products that demonstrate their learning. Some examples of student work could include:

- Promoting a local business or organisation through various mediums based on interviews and research.
- Addressing social issues such as <u>Ebola</u>, using video editing tools like <u>Screencastify</u>, <u>iMovie</u>, or <u>WeVideo</u>.
- Demonstrating literary analysis through approaches similar to <u>How it should</u> <u>have ended</u> and <u>Honest Trailers</u>. Most students' phones have a camera app to capture images and video.
- Creating drawings or diagrams that are used in place of notes for giving a speech.

The final product and the major checkpoints along the PBL experience are opportunities for students to design their own products that demonstrate learning outcomes. How is it possible for students to design their own learning



artefacts that align to academic outcomes? The answer is having clear academic criteria.

A PBL unit is made up of components that, when put together, enable students to develop skills that progressively shape complex understanding of significant content. Typically, these components are anchored by formative assessment checkpoints to track learning progress, and are used for additional coaching and differentiation of instruction where needed (i.e. **The Propositions Project**). Some formative assessment checkpoints, along with the final product, are an opportunity for students to organically decide how they want to demonstrate their learning.

Making the experience informative, engaging and meaningful requires four assessment criteria.

# 1. Significant content is clear and focused

The core of every PBL unit is significant content that comes from an established curriculum. The unit is comprised of key concepts and skills, which students will need to demonstrate understanding of at various junctions of the PBL experience, and culminates with the final product or performance. For example, if the focus is developing persuasive communication that includes skilful use of counterargument,



students could develop a campaign that advocates for a social need or raises awareness about an issue where the clear criteria would include learning experiences about: elements of persuasive communication, structures for counterarguments and approaches to supporting details (i.e. examples, illustrations, and data points).

At the heart of student voice is a shared understanding by teachers and students of what concepts and skills must be acquired. It is critical that teachers ensure that there are no misunderstandings, misinterpretations or lack of awareness by students. Otherwise, the quality of student-designed products may lack direction, substance, and/or connection to the significant content. When students' understanding matches the focus, great results can happen as their products align with the intended outcomes.

# 2. Learning targets criteria used for concrete formative feedback

Unpacking significant curriculum content into learning targets for each lesson helps teachers to more efficiently manage the tracking of student growth. Students benefit from knowing the learning targets because they can participate in reflection on formative feedback about their product work during each stage of the PBL unit. No teacher wants to realise that students have fallen critically far behind when the unit is almost over.

When students are creatively designing different products to demonstrate their learning, daily formative feedback helps them and teachers to track progress and need for support. Students become partners in the instruction and learning process.

Clear, specific learning criteria enable targeted assessments of what students know and do not know. Formative assessments focus on chunks of skills that are the basis for more complex concepts. For PBL, checkpoints or milestones break up the unit into stages of advancement. Students must achieve a level of understanding before moving to the next phase. These assessments inform teachers of what each student needs to grow.

In the example of teaching persuasive writing, formative checkpoints may include:

- Analysis of published writing or video for persuasive elements. Student responses could be written or oral.
- Explanation of a detailed outline or thought web for students' chosen topics.
- Feedback comments on what worked well and what needs to be changed for the first draft. Peers and teacher provide the feedback orally and written.

There are many other ways that formative assessments of learning targets can be demonstrated as checkpoints prior to the final product work. Traditional tools include: exit cards (tickets out the door), journaling, observational checklists and protocols such as **Think Dots** and **Fishbowl**. Student-centred approaches include: peer feedback, **Socratic Seminar** (**guidelines**), **Harkness Protocol** (see a **short introduction video**, plus a useful **article by Dayna Laur**), critiques of commercials and other videos, and proposed storyboards. The many options offer differentiated approaches that support how students learn.

The learning criteria also need to be specific as to what concepts students must

demonstrate with their final product. Returning to the example of persuasive writing, the teacher would communicate the following requirements for each student's persuasive topic:

- Provide a final product that specifically demonstrates one to three types of persuasive skills.
- Explain the success or failure of the campaign using two or three pieces of evidence.
- 3. Make an appeal to which their target audience can relate.

These guidelines become concrete focus areas for peer feedback, and pupils can use them to offer suggestions and praise that is targeted and helpful to the writer.

#### Running feedback groups

All guidelines on PBL recommend running peerto-peer feedback or critiquing groups as part of the reflection and revision element of PBL – it's another opportunity for pupils to feel like their voice is being heard, and brings tremendous value for all participants. During a student-run feedback session, the product author receives ideas and insights from diverse perspectives – which is especially helpful because, as authors, we become so close to our work that we cannot always see the flaws and gems – while the pupil participants develop a deeper understanding of the learning targets as they use them to provide feedback to the author. They also gain ideas for their own products.

The Innovation Unit's guide to PBL includes a list of four potential peer-to-peer feedback activities:

- Gallery walk Students display their drafts around the classroom. The class are then free to wander around the 'gallery' for around 20 minutes or so, making notes on post-its and sticking them to the drafts with positive points and suggestions for improvement.
- Dilemma protocol Students work in groups of four. One child shares their draft and tells the others one thing they're struggling with their 'dilemma'. The rest of the group then discusses possible solutions. The important part of this approach is that the sharer stays silent for six to seven minutes as the others



converse, taking notes but not participating. After the time is up, the sharer rejoins the conversation to talk over suggestions they liked the sound of, taking the opportunity to ask for any clarification. This process is repeated until all group members have had the chance to pose a dilemma.

- Workshop-style critique Pupils work in groups of three and are given a list of questions about the product in hand. Students then take turns presenting their product to their group and discuss the questions as a way of improving their product. Each presentation plus feedback should last around ten to 15 minutes.
- Pair critique Students work in pairs and spend 15 to 20 minutes really digging into a product and evaluating the work. The PBL guide suggests this type of critique session as a final critique before the product is turned in for final assessment

### 3. When it comes to logistical requirements, less is more

Reducing logistical requirements encourages student creativity and innovation. Here, the word 'logistics' addresses the non-academic requirements of a learner-led PBL unit, such as structure and form. Keeping these requirements to a minimum encourages students to be more creative and innovative, because they are not bound by the teacher's idea for product appearance. Instead, they can focus on the academic criteria as they shape their own vision for the product. Logistical requirements comprise three parts:

- 1. how the final product can be shaped (appearance, format, and structure)
- 2. quantity of data (product size, length of time, number of details or images)
- 3. required elements needed to support the academic concepts (e.g. skills, references).

#### Shaping the final product

Shape limits students to a fixed structure. For example, an essay means that students cannot choose video tools or a role-play approach. An essay might be required if the focus is on written expression, but if the focus is on the concept of persuasion, as per our example, then videos, podcasts, or speeches are some other options. In this case, you could still ask for a written component, perhaps explaining how they chose and developed their final product.

#### How long? How much?

When the academic criteria are clear and focused, quantity of data serves a minimal purpose. Complex ideas may inherently require length and size without explicitly saying so. Requiring five paragraphs may limit a student's ability to expand on their thinking, because they focus on the number of paragraphs instead of the quality of the significant content. Also, using the phrase 'paragraph' could unintentionally limit students from using other mediums such as video and role-play, both of which could require a script or storyboard format.

#### Elements that support academic concepts

Required elements help remind students of what to include. One should be careful that what is included does not confuse the academic criteria. The purpose of logistical criteria is to offer guidance for how to show the learning, not what should be learnt. For example, neatness and use of colour may be important logistical needs, but if a student fails to do these properly, does it truly demonstrate a lack of understanding for such concepts as application of the laws of motion, creating algebraic expressions, or composing an effective persuasive essay?

In the case of all three logistical requirements, less is always more – minimising these details encourages students' creativity and/or innovation for ideas.



### When pupils don't meet the logistical requirements...

Use logistical requirements to coach students on the development of the product. Prior to submitting the product, students should meet with peers, and sometimes the teacher, to review the logistics for any areas that have not been addressed. After such sessions, students do their best to polish off the work.

When teachers receive submissions that fall short of the logistical requirements, there are at least two options:

- Return the product to the student to fulfil the logistical requirements. The student may have to complete the work in class, over lunch, after school, or as homework. The message is that the logistics must be completed as a gatekeeper to the work being accepted for evaluation.
- 2. Accept the work. Assess it for a grade based on the academic criteria. Include coaching comments on the missing logistical elements, which are reported to parents or guardians. **This avoids 'assessment fog'**.

Logistical requirements are not part of the assessment of learning, although they can be used to give coaching feedback on developing a better product. Academic criteria are the qualitative expectation that students need to meet. We need to ensure that what students craft can adequately demonstrate the learning outcomes.

A cautionary tale for when the product is not a match for the academic criteria: In a history-literature class, students had the task of composing a poem that was creative, engaging, reflected the time period and included a list of key historical events. One student struggled to craft a poem because of the historical content. He tried being subtle by using imagery and metaphors to reflect the events, but was told that the events had to be explicit in the poem. The student complied, but lost investment in the assignment. Shutting down student voice resulted in the pupil's poem becoming a summary of the textbook, rather than a potentially epic success.

## 4. Allow student imagination to lead the way

The ultimate goal is students deeply engaged in their work, translating research and analysis into solutions or proposals for an authentic audience. Following the

three aforementioned guidelines will result in empowering students to design their own demonstration of learning. This leads us to our final guideline: Make sure students know their product must fulfil the provided academic criteria, but let their imaginations run wild when it comes to what they produce. Their ideas will not disappoint – video presentations, prototyping using Lego, recordings of game worlds, vlogging, podcasting, social media formatting, photo essays and even traditional written essays.

Teachers do not need to understand the source of student inspiration. They only need to know how each student's approach can lead to the expected outcome. Ask students to craft an action plan for executing the product and its delivery to the teacher. Coach them through any potential problems in their plan. Once the student plan is approved, use planned checkpoints to monitor and assess progress of the product choice, addressing the learning targets as intended. When in doubt, ask students questions that coach them to analyse gaps in learning. This reflection alone will be a great formative assessment for students to think through their planning, and foster their voice in the PBL experience.

When the significant content is unpacked and clearly understood by students, the final product can be undefined. The most important academic concern is that students master the curriculum taught in the PBL unit. How students choose to demonstrate that understanding is of lesser import so long as they are on target.

# Putting pupils in the driving seat

'It's amazing what students can do when they put their minds to it.' I hear some version of this comment often, especially when caring teachers struggle to find the means to engage students with the work – of getting them to 'put their minds to it'. I've had this thought on occasions during my own career.

The first step to addressing this need is to involve students in conversation about the PBL unit. Get their feedback on meaningful products for the target audience, as we would do with our colleagues. Or start small: focus on an important checkpoint that leads to the final product. Allow students to design their own way of showing what they know. It's inspirational to see them become innovative. Even if the product they design fails, they will have learned much of the content – and isn't that what we're after?

Sometimes it's difficult to include students in the process as partners because it means giving up control. Control can be illusionary as students choose whether or not to participate at a high level. Student voice is powerful. Embrace it as part of your planning of PBL and other units. Students will put up fewer barriers. As they realise that their voice matters, you will have stronger collaboration with them than ever before.

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## Knowledge trails

- 1. Boosting the pupil voice Allowing your students to create the lesson plan sounds like volunteering for anarchy! But when primary teacher Luisa Dolton tried it, she boosted her students' motivation and willingness to take on challenging tasks.
  - library.teachingtimes.com/articles/boosting-pupil-voice
- Learner driven learning in classrooms Everyone accepts that the goal of 'independent learning' is what
  education should be about, but relinquishing control of your classroom at least occasionally can be harder than
  it seems. Chris Watkins outlines a way forward.
  - library.teachingtimes.com/articles/learner-driver-learning-in-classroom