21st CENTURY **LEARNING DESIGN**

Assessment Results For: Startup Apprentice 8-week Program .

For this Learning Activity we examined…

1. COLLABORATION
2. KNOWLEDGE CONSTRUCTION
3. SELF REGULATION
4. REAL WORLD PROBLEM SOLVING AND INNOVATION
5. USE OF ICT FOR LEARNING
6. SKILLFUL COMMUNICATION

COLLABORATION

Personal Overview: Learners DO work together in pairs or groups AND they DO have shared responsibility AND they DO make substantive decisions together about the purpose, content, process, or product of their work AND their work is interdependent.

Summary: Working collaboratively in partnership with others and in teams is essential for learning and life success in today's independent world.

Collaboration is the lynchpin for effective participation in families and workplaces, and in local and global communities.

Do learners collaborate informally?

Learners collaborate informally when they help each other's learning, or when one seeks learning assistance or information from another to benefit their learning work.

As teachers, we can use these opportunities to scaffold learner's understandings, reflections and collaborative skills.

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At times, informal collaboration may be part of a more formal collaboration, for example, a learner might informally seek information online from an expert to fulfil their individual role and task responsibilities as part of a team project. The immediate goal, however is to help their individual learning.

Is this shared responsibility for a joint outcome or product?

Learners have shared responsibility when they work together to develop a common or joint outcome, product, design, response or decision. This gives them a reason and shared purpose for working together.

Shared responsibility is more than simply helping each other: learners must collectively own the work and be mutually responsible for its outcome. This might, for example, involve a partner or team conversation and joint decision about an important issue, investigating an authentic problem and developing a team solution, or creating a joint design and end product.

Is this substantive decision-making?

It is one thing for learners to have or be given 'shared responsibility' by us as teachers, and quite another to be actively engaged in working out and making decisions about what that looks and sounds like in practice.

Learning and collaboration are both strengthened considerably when learners must make substantive decisions and resolve important issues that will guide their work together. Substantive decisions are decisions that shape the goals, content, process, outcome or product of learners' work.

Is learners' work interdependent?

Learning work is interdependent when all learners must participate equitably in order for the team to succeed. Too often, a group of learners may have shared responsibility for an outcome, but in practice the decisions made result in one or two learners doing most of the work for the team, or the work is not divided equitably and fairly.

It is important that collaborative learning work is structured to require a coherent outcome to which all members have contributed. It must take the work of all team members into account so that their outcome or product is complete and fits together.

KNOWLEDGE CONSTRUCTION

Personal Overview: Learners DO engage in meaningful knowledge construction: learners see relevance, purpose, connect new ideas to prior knowledge and access learning in diverse ways AND learners DO actively work with significant ideas, topics, questions and thinking processes AND learners ARE required to make connections and identify patterns and relationships among them AND learners ARE required to demonstrate and apply their new knowledge to a new context.

Summary: In a world where information is growing exponentially, the meaning of 'knowing' has shifted from being able to consume, remember and reproduce information to one where learners actively construct understanding to create knowledge that is new and usable to them.

Deep understanding is constructed when learners explore and actively work with significant ideas, topics and questions. Explicit opportunities to make connections, to identify patterns and see relationships among these enable learners to organize and synthesize new and coherent understandings.

This is essential to effective knowledge navigation in today's world.

Do learners engage in meaningful knowledge construction?

Learners are more likely to see meaning and make sense of learning when they understand its relevance and purpose.

This is enhanced when learning intentions and topics are explicitly connected to learners' lives and experiences, and real-world contexts.

When learners understand why the learning is important, and how this will help them now or in the future, they are more likely to commit to the learning work.

When we activate, assess, and build on learners' existing knowledge and beliefs, and use this as the starting point for new learning, learners are more able to acquire coherent and thorough understanding because they can make meaningful connections between new ideas and their prior knowledge.

Do learners work with significant ideas, topics, questions and thinking?

In today's complex, ever-changing world, a focus on conceptual and deep understanding is central to effective knowledge construction.

'Covering the curriculum' for breadth or addressing too many topics works against

understanding because it is difficult for learners to make connections. What they are more likely to acquire is a set of disconnected facts. Even young learners benefit from and can grasp important conceptual ideas when they are presented in developmentally appropriate ways.

Do learners make important connections and identify patterns?

Making connections, identifying patterns and seeing relationships among these is essential for construction of deep understanding and for navigating a massive sea of knowledge effectively in an inter-connected global word.

This is too important to be left to chance, and learners need pattern-recognition experiences from an early age.

Whilst our brains are biologically designed to seek patterns, learners do not automatically realize that a concept, a learning process, or one curriculum area is connected to another in any shape or form. Learning activity design must assist learners to make connections, helping them to see the whole, not just the parts, and our teaching must actively scaffold learners' understandings and skills to do this effectively.

Do learners apply knowledge to new contexts?

While all learning involves transfer from previous experiences, a true test of effective knowledge construction is the extent to which learners can transfer or apply their new knowledge appropriately to new and authentic situations and settings.

Understanding is demonstrated when learners use their new knowledge to: adapt, extend or customise their new knowledge for new, specific situations/contexts, apply what they have learned to real-world challenges or problems and apply what they have learned to their own lives, both inside and outside of school.

SELF REGULATION

Personal Overview: Learning activities provide substantive time and opportunity for learners to develop self-regulation skills AND learners DO know the learning intentions and associated success criteria in advance of the learning work AND learners DO have the opportunity to plan their own work AND learners DO use feedback to improve their learning.

Summary: Today's complex world demands self-regulated thinkers and learners who can take responsibility for their lives, their work, and their ongoing learning.

In past times, teaching was often viewed as 'telling'; teachers would organize and direct student learning, tell learners what to do and expect compliance.

Today, we recognise that this way of working produces dependency and compliance rather than self-regulation because learners' abilities to think effectively, make decisions for themselves, and take ownership of their learning are diminished.

Self-regulation involves a range of skills that become increasingly sophisticated as they develop over time. Therefore, learning activities must provide substantive time and ongoing opportunities for learners to develop these, with visibility into clear learning intentions or goals and success criteria that learners can use to plan, monitor, and assess their own learning work.

In the most successful learning activities, learners receive and use feedback effectively to improve their learning and related work products.

Does this offer substantive time and opportunity to develop self-regulation?

Length of time is a basic pre-requisite for learning opportunities to develop self-regulation skills.

Learning activities must offer student learners ongoing opportunities to work on and make progress with self-regulation skills over a substantive period of time.

For example, teachers might initially establish learning goals or intentions for learning activities; over time, this would show movement to co-construction and negotiation of goals with learners, through to learners being able to effectively set and monitor their own learning goals.

This kind of learning cannot be achieved in a single lesson or class period, or taught without multiple and ongoing opportunities for learners to practise and develop self-regulation skills.

Do learners understand learning intentions and success criteria in advance of the learning activity?

Learner understanding of the goals or learning intentions and associated success criteria in advance of the learning work to be done markedly enhances self-regulation by providing guidance that enables learners to plan, monitor, reflect on and improve the progress and quality of their work as they do it.

Self-regulation is further enhanced when learners co-construct learning intentions and associated success criteria with their teachers and/or peers, and when they are involved in

self-assessment. If learners do not know or understand the learning intentions and assessment or success criteria in advance of the learning work, they are NOT able to plan effectively to achieve desired outcomes.

Are these learners planning their own work?

Beginning an inquiry unit, the teacher sets out the key question for investigation, and provides detailed instructions on how learners will explore this.

There is no recognition of what learners already know or opportunity to plan, reflect or follow their interests.

Is feedback being used to improve learning?

Feedback, used effectively, is one of the most significant influences on improving learning.

When learners receive feedback on their learning and use that feedback explicitly to improve their learning work, they can reflect on successes and mistakes made, build on from successes, plan improvement, set new goals and plan their next steps for learning.

Feedback may come from teachers, peers or relevant others. Learners can also engage in self-feedback through a deliberate process of self-reflection.

Feedback is not the same as praise. Comments such as 'good job' or 'great work' do little to help the learner know what constitutes great work.

Effective feedback includes:

Telling the learner specifically what they are doing well and offers specific guidance to help move their learning forward.

Directly connected to the learning intentions or goals and success criteria.

Acknowledges and raises awareness of progress and improvements needed.

Leads to reflection and planning of next steps.

REAL WORLD PROBLEM SOLVING AND INNOVATION

Personal Overview: Learners DO work with real-world issues, opportunities, challenges and problems for authentic audiences and real-life benefits AND they DO actively inquire and pose questions to identify authentic needs, opportunities and define problems AND they DO generate possibilities, design and test out ideas and solutions AND they DO evaluate, reflect and take action on their ideas in the real world.

Summary: In a world characterized by exponential change and complex challenge, it is essential for learners to develop dynamic, innovative mind-frames and capabilities that enable them to continually adapt, create the 'new,' and actively contribute to making the world a better place for all.

Learners work as real-world innovators and problem-solvers when they engage with authentic issues, opportunities, challenges, and problems for authentic audiences and benefits.

They actively inquire into these and generate multiple ideas and options from which to create, design and test their solutions and ideas.

Do learners work with real-world issues, opportunities, challenges and problems for authentic audiences and real life benefits?

When learners see real usefulness in what they are doing they are more motivated and empowered to learn.

Personal and social responsibility is developed when learners make a positive contribution to both their own and others' lives. This helps to shape their learning, their thinking and their world in ways that make a real difference.

Do learners actively inquire and pose questions?

Real-world innovation and problem-solving requires learners to actively inquire, pose, and pursue questions in order to understand and accurately identify authentic needs, issues, opportunities, challenges and problems.

Do learners generate possibilities, design and test out ideas and solutions?

Learners generate multiple possibilities, alternatives and solutions from which to create, design and test their ideas.

When learners work as innovators, problem-solvers and designers, structure and process are both necessary and invaluable for learning. The process used will depend on the type of innovation or problem at hand, e.g Design Thinking process vs brainstorming scaffold.

Do learners evaluate, reflect and take action?

Real-world innovation and problem-solving is driven by authentic purpose: to make a difference that results in real and authentic benefits for specific audiences and situations.

To achieve this purpose, and to count in this dimension of the rubric, learners must evolve their plans to action in some way. This requires learners to reflect and make key decisions related to implementation and action.

Implementation requires learners to put their ideas and solutions into practice in the real world.

For example, it DOES count as taking action if learners design and build a community garden in the grounds of their school; just designing the garden DOES NOT count.

USE OF ICT FOR LEARNING

Personal Overview: Learners' use of ICT is required to construct knowledge in ways that add value to learning AND learners use ICT to design and create new ideas, products and solutions for authentic audiences and users. BUT ICT work does not demonstrate ethical use, social-ethical protocols, or any additional 21C capabilities.

Summary: While ICT is becoming increasingly common in classrooms and learning environments, it is often used to present or passively consume information.

ICT has the potential to fundamentally transform learning experiences, to enable learning in ways that were not previously possible.

ICT is a powerful tool to support the development of a wide range of 21st Century capabilities and skills.

This ICT rubric examines how learners use ICT: whether it is used in more powerful ways to construct knowledge, to create new ideas, products and solutions for authentic audiences and users, whether it is used ethically and develops other 21C capabilities.

Do these learners have opportunities to use ICT?

This rubric looks at the opportunities learners have to use ICT directly to complete all or part of the learning activity.

While teacher use of ICT can significantly enhance teaching, this rubric focuses solely on how the learning activity requires student learners to use ICT in their learning.

The use of ICT to present information does NOT count as learner use.

Does ICT use support knowledge-construction and add value to learning?

Real knowledge construction happens when learners generate, construct, and actively create ideas and understandings that are new to them. This requires them to engage in complex, productive and intentional thinking, use critical and creative thinking skills and processes to support deep understanding, and apply or use their learning in other contexts.

The knowledge construction supported by ICT must connect to the learning goals of the activity AND it must add value to the learning work.

The use of ICT as an end in itself does NOT qualify.

Do these learners use ICT to design and create multi-modal ideas, products and solutions for authentic audiences and users?

Learning is more powerful when learners use ICT to design and create new knowledge, understandings, solutions, ideas or products for authentic audiences and users. This challenges learners to think, learn and use ICT in more complex ways.

When learners have to teach or demonstrate learning to others in some way, they achieve deeper understanding themselves.

When they act as designers to create new products or solutions to real-world issues, problems or opportunities that others can use, they develop a sense of efficacy and empowerment that comes from learning they can make a difference to others and to their world.

Does learner use of ICT demonstrate ethics, social-ethical protocols and one or more additional 21C capabilities?

In the Australian Curriculum, ethical use of ICT is considered an integral and critical part of learners' development.

This requires learners to learn about ethical use of ICT, and to demonstrate strong application of social-ethical protocols in their work.

Moreover, ICT is used most powerfully when it enables and supports the development of 21st capabilities for deeper and richer learning than was previously possible.

Learners can be designers and producers of knowledge (Knowledge Construction), they can collaborate, communicate, innovate and problem-solve as they use ICT to address real-life issues and projects that make a positive difference to learning and the world. (Skillful Communication, Collaboration, Use of ICT for learning, Real-world Problem-Solving and Innovation).

SKILLFUL COMMUNICATION

Personal Overview: Learners ARE required to produce coherent communication AND they ARE required to design their communication for a particular audience AND learners are required to produce substantive, multi-modal communication AND learners are required to reflect on and use the process of their learning to develop and improve their communication.

Summary: Developing technologies have created new opportunities to enrich engagement, learning, and active participation in society with a whole range of contemporary communication modes and tools, and with broader reach and fewer barriers than ever before.

Communications can be spoken, written, visual or multimodal and in print or digital and online forms.

Multimodal texts combine language with other systems for communicating such as visual images, soundtracks and spoken word, for example, in film or digital presentations.

This rubric examines whether connected and coherent thought is evident in a range of communication modes, whether it achieves an authentic purpose for a particular audience, and whether the communication is substantive and multi-modal in nature.

Does this learning activity require coherent communication?

The links between language and thinking are significant, each develops the other.

When learners are able to listen, read, view, write, record, and interact to express, exchange, explore and develop ideas with others, not only do they learn important

communication skills, their thinking, comprehension and understanding is deepened.

This dimension requires that learners understand, select and use a range of communication modes and tools to produce coherent communication i.e. communication that makes sense and reflects coherent and connected ideas, not a single simple thought.

Are learners required to design their communication for a particular audience?

When learners compose and produce communication for a particular audience, they must ensure that their communication is appropriately designed to achieve maximum understanding, relevance and meaning for that audience.

This requires learners to carefully select the content, communication style, language, modes and tools they will use to tailor their communication to the needs, preferences and context of that specific audience.

Is this substantive, multi-modal communication?

Communication is multi-modal when it includes the use of more than one type of communication mode or tool to produce a coherent message.

For example, learners might create a presentation that integrates video and text, or embed a photograph into a blog post.

The communication is considered multi-modal only if the elements work together to produce a stronger message than any one element alone.

Do learners use the process of their learning to improve their communication?

What occurs during the process of learning - the interactions, processes, communication modes, language and skills used - are key to monitoring, assessing and explicitly developing learners' communication skills. While capturing this in the past has not been easy, current and emerging technologies are making this possible in powerful ways because learners can be more actively involved in reflecting and monitoring their own development and learning.