"Does teaching creativity across the curriculum lead to young people who are better prepared for their future in a changing workforce?"

Penryn Partnership Creativity Collaboratives

Preparing for a Creative Future

Year Two Report: Build and Test

Funded by:
Arts Council England

Authors:
Ursula Crickmay,
Sarah Childs,
Associate Professor Kerry Chappell

School of Education, University of Exeter
Penryn College

Contact:
creativitycollaboratives@penryn-college.cornwall.sch.uk
Sarah Childs- Penryn Creativity Collaboratives Lead
Penryn College 01326 372379

Penryn College "Achieving through Challenge"

University of Exeter

Supported using public funding by ARTS COUNCIL ENGLAND

Freelands Foundation

Executive Summary

Creativity Collaboratives is a national pilot programme of eight clusters of schools across England who are working together to test innovative practices in teaching for creativity, sharing learning to facilitate system-wide change. The programme is funded by Arts Council England with support from the Freelands Foundation and launched in October 2021. Creativity Collaboratives: Penryn Partnership is the South-West pilot for the programme, and over the course of three years is focussed on exploring one central question:

- Does teaching creativity across the curriculum lead to young people who are better prepared for their future in a changing workforce?

This document reports on the research and findings from Year 2 of Penryn Creativity Collaboratives (PCC). Further detail from our Year 1 journey can be found in our first report:

Crickmay, U. Childs, S. Chappell, K. (2023). *Preparing for a Creative Future: Year One Report Question, Challenge and Explore.* https://penryn-college.cornwall.sch.uk/creativity-collaboratives

PCC is led by Penryn College, an 11-16 school on the south Cornish coast, and incorporates the existing Penryn Partnership (the College, its eight feeder primary schools and two Area Resource Base units), a Creativity Collaboratives Network that comprises industry and cultural partners, and research partner, the University of Exeter (UoE). In Year 2 the aim was to respond to research in Year 1 and to 'Build and Test'. This was achieved through three intertwined strands:

- A programme of Action Research with mentoring and training provided by the UoE team;
- The integration of CPD and classroom activities in close collaboration with Industry and Cultural Partners;
- Overarching synthesis research led by the UoE team

The Year 2 research questions were:

RQ1. How do creative pedagogies manifest in the Penryn Partnership?
RQ2. How do students' creative skills progress?

What happened in Year 2

A network of teacher researchers was established to lead collaborative action research projects modelled after the Creativity Action Research Awards (2006-8). They often worked in partnership with an industry or cultural partner and were trained and mentored by UoE staff. The programme of activities during Year 2 focused at different times on Action Research training and mentoring, overarching data collection, staff CPD and learning community expansion. It was vitally important that these three strands fed each other and allowed for a coherent 'Build and Test' of the PCC creative skills and pedagogies. Both data from the teacher researchers' studies and feedback from other Year 2 Build and Test Activities have been collated and woven into the overarching synthesis research led by UoE, alongside pre and post questionnaire data.

The Research

Methodology – action research

Each teacher researcher developed their own line of enquiry which related to the overarching research question but was specific to their own teaching and learning context. Data collection used varied tools which were triangulated, including: observations, interviews, focus groups, surveys, reflective journals / diaries, vlogs, photographs, video, students' work, and a 'Preparing for a Creative Future: Creative Skills' wheel. Data analysis was conducted by the teacher researchers using systematic coding of words and visual data, alongside descriptive statistics. This provided the basis for teachers to write their research reports.

Methodology – research synthesis

A mixed-methods approach was used including a questionnaire developed by the university researchers to collect data in direct response to the research questions, and a synthesised analysis of the action research data.

Ethical permission was gained from the University of Exeter Ethics Committee, and processes have been based on the British Educational Research Association (2018) Research Ethics Guidelines. All data in relation to students has been anonymised and pseudonyms are used throughout.

Action research findings

Childs, A. (2023). *How does working on real-world projects lead to learners being powerful in their understanding?* Penryn Creativity Collaboratives.
(Year 10)

Churcher, E. (2023). *How can children utilise creative skills to show empowered action in the Key Stage One science curriculum?* Penryn Creativity Collaboratives.
(Years 1 & 2)

Collinge, M. (2023). *How can children make use of creative skills (supported by dialogic and collaborative metacognitive thinking) to design their own scientific enquiry questions?* Penryn Creativity Collaboratives.
(Year 6)

Fenton, J. (2023). *How might collaborative 'learning friends' empower children to take risks and empowered action in their learning?* Penryn Creativity Collaboratives.
(Years 1 & 5)

French, H. (2023). *How do stories influence play for children in their early years?* Penryn Creativity Collaboratives.
(Early Years)

Herring, B. (2023). *How might immersive 'real-world' experiences influence empowered action in teenagers?* Penryn Creativity Collaboratives.
(Year 9)

Joyce, K. (2023). *How do you develop children's independence through the use of reflective and self-regulation strategies?* Penryn Creativity Collaboratives.
(Year 6)

Kent, C. (2023). *How do we encourage creativity through outdoor learning?* Penryn Creativity Collaboratives.
(Years 3 & 4)

Manclark, H. (2023). *How do risk, immersion and play influence creativity in a Key Stage 3 English classroom?* Penryn Creativity Collaboratives.
(Year 8)

Mitchell, C. (2023). *Which approaches to real world learning lead to students demonstrating great ownership through empowered action?* Penryn Creativity Collaboratives.
(Year 10)

Teasdale, B. (2023). *How can teaching writing through embodied immersion impact innovation, imagination and playfulness?* Penryn Creativity Collaboratives.
(Year 5)

Van-Veen, E. (2023). *How can we harness creative skills when thinking like a scientist?* Penryn Creativity Collaboratives.
(Year 8)

Westhead, L . (2023). *How do creative pedagogies in the geography classroom lead to deeper understanding of geomorphic processes?* Penryn Creativity Collaboratives.
(Year 9)

Research synthesis findings

Research Question 1: How do creative pedagogies manifest in the Penryn Partnership?

Figure 1 shows on average the level to which teachers perceived themselves to be using different features of teaching for creativity prior to and following the Action Research projects. The chart shows the mean score for each aspect of the pedagogic framework utilised, using a 5 point Likert scale.

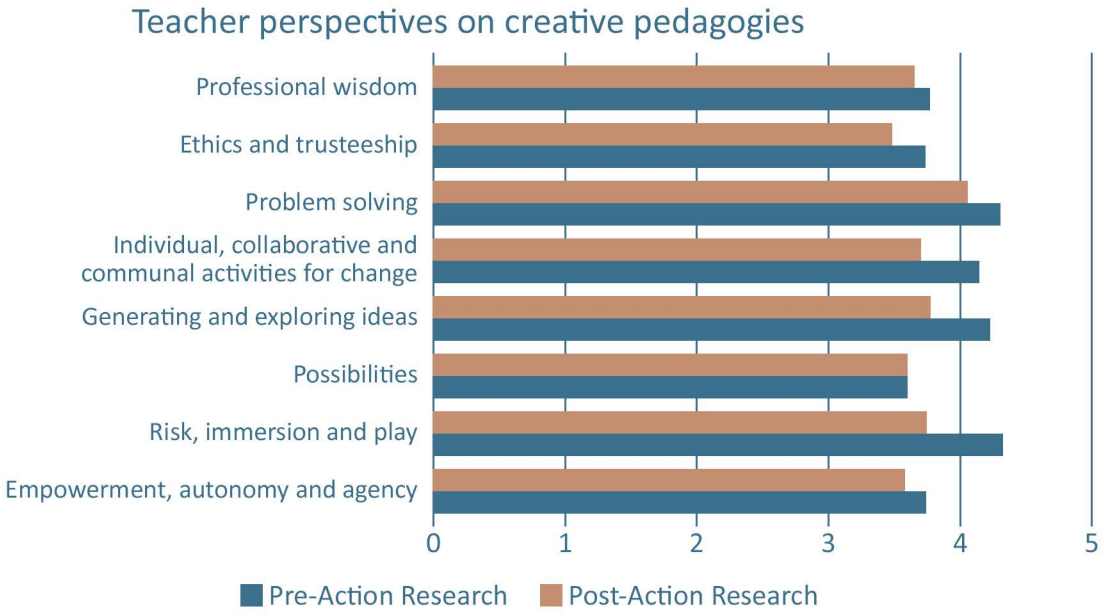


Figure 1: Summarised reporting of pedagogic features

These results show that prior to the action research, teachers considered that the creative pedagogy they used the most was 'problem solving' and the one they reported using least was 'ethics and trusteeship'. After the action research, the creative pedagogy that teachers reported using most was 'risk, immersion and play' whilst 'possibilities' scored the lowest. The overall difference in teachers' perception of how much they used creative pedagogies prior to the action research and after showed a modest increase of 0.3 on the 5-point Likert scale.

The qualitative data showed that whilst the pedagogic framework splits down pedagogies in order to foreground or highlight different aspects of practice, none of these features exists in isolation, and that a creative pedagogy can only be understood as a multi-dimensional practice. Figure 1 shows that there was considerably more data for some parts of the pedagogic framework compared with others; this was anticipated given the open-ended brief and the small scale of the research.

Pedagogic Feature	Amount of data
Risk, immersion and play	80
Empowerment, autonomy and agency	46
Individual, collaborative, communal activities for change	16
Problem solving	15
Professional wisdom	13
Generating and exploring ideas	12
Possibilities	10
Ethics and trusteeship	2

Table 1: Amount of data relating to different pedagogic features

Empowerment, autonomy and agency

Teacher researchers particularly commented on the freedom they had to take their own risks in their practice during the action research process, which they experienced as an increase in autonomy and agency compared with usual practice. There was an interesting oscillation between discussion of teacher autonomy and student empowerment in some of the data, pointing towards an interrelation of these two. For some teacher researchers, opportunities for student / teacher empowerment were described as needing to be balanced with, or as existing in conflict with, the demands of a knowledge and skills-based curriculum.

Risk, immersion and play

This was the most widely represented and discussed pedagogy in the data, likely due to it providing the focus for a number of the individual action research projects. The various understandings of 'immersion' adopted in the AR projects include the sense of being absorbed in activity and also the experience of being flooded with a particular type of activity, as well as activity grounded in the senses and in the body. There were a number of challenges to this pedagogy, including students' fear of failure, success criteria and curriculum coverage inhibiting risk-taking, freedom itself being overwhelming, students' low self esteem, students' perception of what constitutes learning, overhang attitudes from the pandemic. Time was the most widely cited pre-requisite for facilitating processes of risk, immersion and play, as well as teachers themselves being able to take risks.

Possibilities

There were relatively few examples of teacher researchers explicitly discussing facilitation of possibilities, however, many of the approaches described above in terms of empowerment, autonomy and agency could also be considered as nurturing possibility thinking.

Generating and exploring ideas

There was strong evidence among the primary school groups of students generating and exploring their own ideas. Although not restricted to the secondary school groups, it was at this level that the need to balance openness and structure, control and freedom, came slightly more to the fore.

Individual, collaborative and communal activities for change

Although there was not extensive discussion of this aspect of pedagogy, it is notable that every action research project involved some aspect of collaboration, so it could thus be seen as the most pervasive pedagogic strategy when teaching for creativity. The collaborations that are discussed often have a 'real-world' character to them, often dovetailing with a 'problem-solving' approach. Similarly, dialogue is not often specifically commented on, but it can be inferred from the projects described to be a background presence in many of them. There were no comments about working communally and few comments about working individually.

Problem solving

A number of the action research projects utilised a problem-solving approach which, as described in the pedagogic framework, often used real problems to motivate and engage learners, and sometimes had a transdisciplinary character.

Ethics and trusteeship

There was hardly any mention of issues relating to ethics or trusteeship in the data. This is an area which could be explored further in the future.

Professional wisdom

Teacher creativity could be witnessed in action through the diversity of different ideas that were developed for the action research projects but was only commented on specifically by one teacher researcher. Educational tensions of accountability / assessment, and time pressures were widely discussed as has already emerged in other parts of the discussion above. There was interesting discussion on how best to record and assess creative skills, which could be further developed. It is worth reflecting here on the data from the questionnaire that suggested that teacher researchers' rating of their own level of agency declined over the course of the action research, which could suggest that these tensions came into sharper focus through participating in the action research process.

Research Question 2: How do students' creative skills progress?

Figures 2 and 3 show how teachers rated different dimensions of their students' creative skills pre- and post the Action research, based on the Penryn Partnership Creative Skills Framework. The Figures show mean responses on a 5-point Likert scale.

Figure 2: Mean scores for Creative Skills prior to the action research

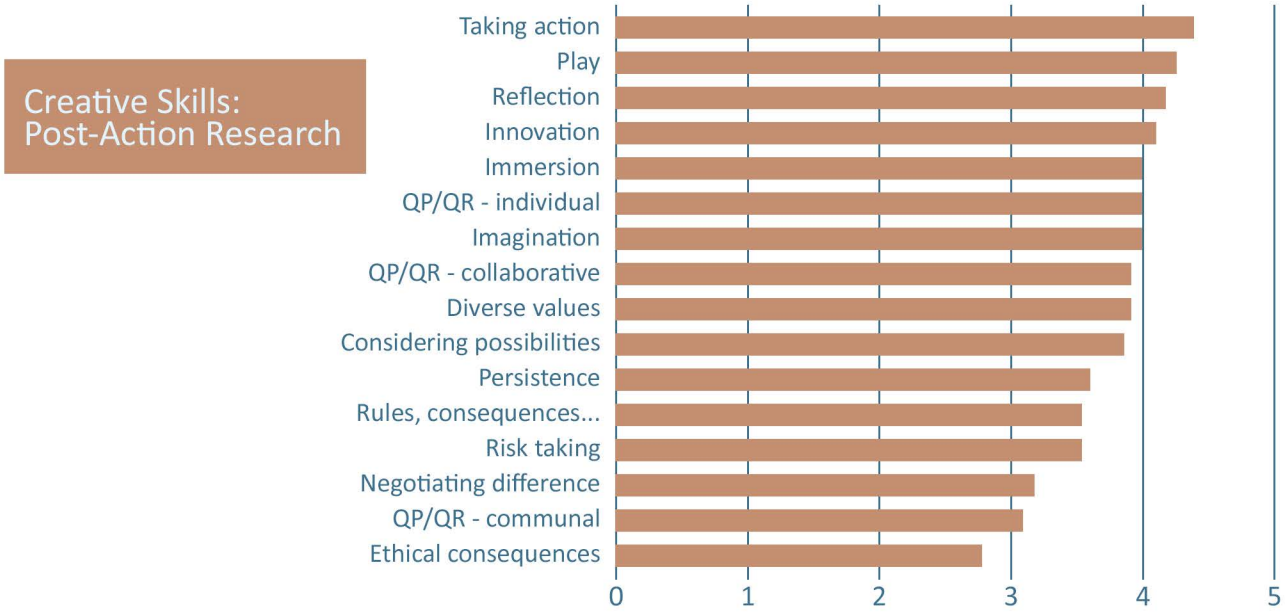


Figure 3: Mean scores for Creative Skills after the action research

Although the numbers participating are too small to draw significant statistical findings, the results suggest teachers' perceived that students' creative skills increased on average by 1.3 points.

Prior to the action research, the areas of creativity in which students' skills were rated most highly were: Innovation, play, taking action, immersion and reflection. The areas in which they were rated least highly were in considering the ethical consequences of creative ideas and actions, and working to pose and respond to questions, including finding and solving problems *as part of a community*.

After the action research, the areas of creativity in which students' skills were rated most highly were immersion and innovation, whilst the lowest rated were considering the ethical consequences of creative ideas and actions and understanding diverse values and how they matter differently. The skills which showed the largest change in teachers' ratings were immersion and risk taking. The skills which showed the least change in teachers' ratings were understanding diverse values, and ethical consequences.

Similarly to the creative pedagogies data, data on students' creative skills was unevenly spread as shown in table 2 (some data referred to the skills as a whole, hence the discrepancy in the aggregated numbers):

Creative Skill	Amount of data
Dialogue and collaboration	**61**
Question posing/responding. problem finding/solving	19
Working individually, collaboratively and within a community	32
Negotiating difference, responding appropriately	5
Empowered action	**58**
Risk Taking	25
Immersion	11
Taking action	14
Honing and developing an idea	**38**
Reflection	13
Understanding rules and consequences	12
Persistence	13
Being imaginative and playful	**34**
Play	10
Imagination	13
Considering possibilities	7
Generating new ideas that matter	**25**
Innovation	11
Considering ethical consequences	4
Understanding diverse values	9

Table 2: Amount of data relating to different creative skills

The overall patterns of data mirror the findings on creative pedagogies, with the most data in the area of dialogue and collaboration which reflects this being demonstrated to be a pervasive pedagogical approach. The second most data is in the area of 'empowered action' which incorporates themes of student agency, risk taking and immersion, areas in which there was extensive pedagogical commentary. The skills of considering ethical consequences, negotiating difference, understanding diverse values and considering possibilities have received little attention, again mirroring the lack of pedagogical attention in these areas.

Dialogue and collaboration

There was a wealth of data providing examples of children actively and ably engaging in dialogue and collaboration, particularly in the areas of collaborative working and question posing and responding/problem finding and solving. Dialogue is most often understood as a verbal exchange between people, and there is scope to extend this to reflect more extensively on a broader sense of verbal or embodied dialogue between people, ideas and disciplines which is perhaps not currently clearly enough articulated in the skills framework.

Honing and Developing an Idea

There was strong evidence of reflecting, analysing and evaluating in KS2 through to KS4; it was not mentioned in the early years or KS1 projects. There was evidence of students developing the discipline specific techniques they needed for their creative work and understanding the rules and consequences of different kinds of creative action across all of the secondary school projects, as well as being observed as a feature of students' work in the KS2 English project. The age group bias towards the older students in this data is worth noting. There was mixed evidence of students showing persistence in crafting and improving their work.

Empowered Action

A large amount of the data fell into this area of the skills framework, and a number of action research projects reported on developing Empowered Action as an overall area of skills. Examples were given of risk-taking evidencing the breadth of different ways in which students can take risks in their learning, alongside a range of different examples of students being immersed in creative action. The data on 'taking action' was mixed.

Being Imaginative and Playful

Being imaginative and playful was reported on more extensively in the early years and primary school projects and was noted very little in the areas of Science and Engineering across all of the age groups, although there were examples of students in these discipline considering possibilities. The most detailed commentary on children's play came from the early years project where the teacher researcher observed children developing their play by drawing on language. Imagination was not restricted to the early years, with students across key stages evidencing it. There was limited data on considering possibilities, which mirrored limited data in this area pedagogically.

Generating New Ideas that Matter

This skill was represented least in the data. There was only one example given of a student considering ethical consequences. There were examples across English, Media and Learning Friends projects of students showing understanding of diverse values.

Wider impact of PCC year 2

Continuing Professional Development (CPD)

- Teacher researchers reflected CPD enabled them to keep the Penryn CC Creatives Skills at the forefront of their mind when redesigning curriculums and lesson planning.
- Teacher researchers increasingly noted they were 'allowing more time' for creative thinking in daily lesson plans and that using the Creative Skills language more frequently in class was leading to greater student understanding across the PCCC.
- Teacher researchers commented that CPD inspired them, gave confidence and practical tips and techniques to evolve a new way of looking at creative pedagogy.
- Opportunities for cultural partners to deliver CPD strengthened networks and frequently built into further interactions between partners, leading to teacher researchers developing other teachers in their teams.
- Teacher researchers repeatedly recognized the importance of their own agency and risk taking.
- School coaching programmes supported opportunities to bring additional teachers, teaching assistants and leaders into the Action Research project, and led to a breadth of learning conversations.
- Teachers and leaders attending CPD and meetings together allowed for professional dialogue to flourish, building greater understanding and capacity to cascade the learning
- Teacher researchers talked about the need for CPD in Year 3 to develop teaching for creativity
- Potential impact was noted regarding findings extending into teacher training and networks of primary and secondary head teachers across Cornwall.

Creative Collaboratives Network partners

- Some teacher researchers worked closely with partners.
- Lack of engagement with partners was often a result of partners not being appropriate for teachers' Action Research plans or a lack of time and capacity to include them in the classroom activities.
- Opportunities for professional dialogue between teacher researchers and partners developed a richness of reciprocal learning.
- Partners were able to model the creative process to teacher researchers and students, and often could identify links within the curriculum for skills needed for future careers.
- Opportunities to spend time with industry partners in the workplace improved awareness of the modern workplace as well as professional dialogue with experts.

Action Research

- Action Research staff survey at the end of Year 2 showed that the Action Research process itself scored the greatest impact
- This correlates with the teacher researchers' attendance and engagement at Action Research CPD which was a compulsory part of the programme for teachers and was thus higher than at the Creativity Network partners wider CPD offer.

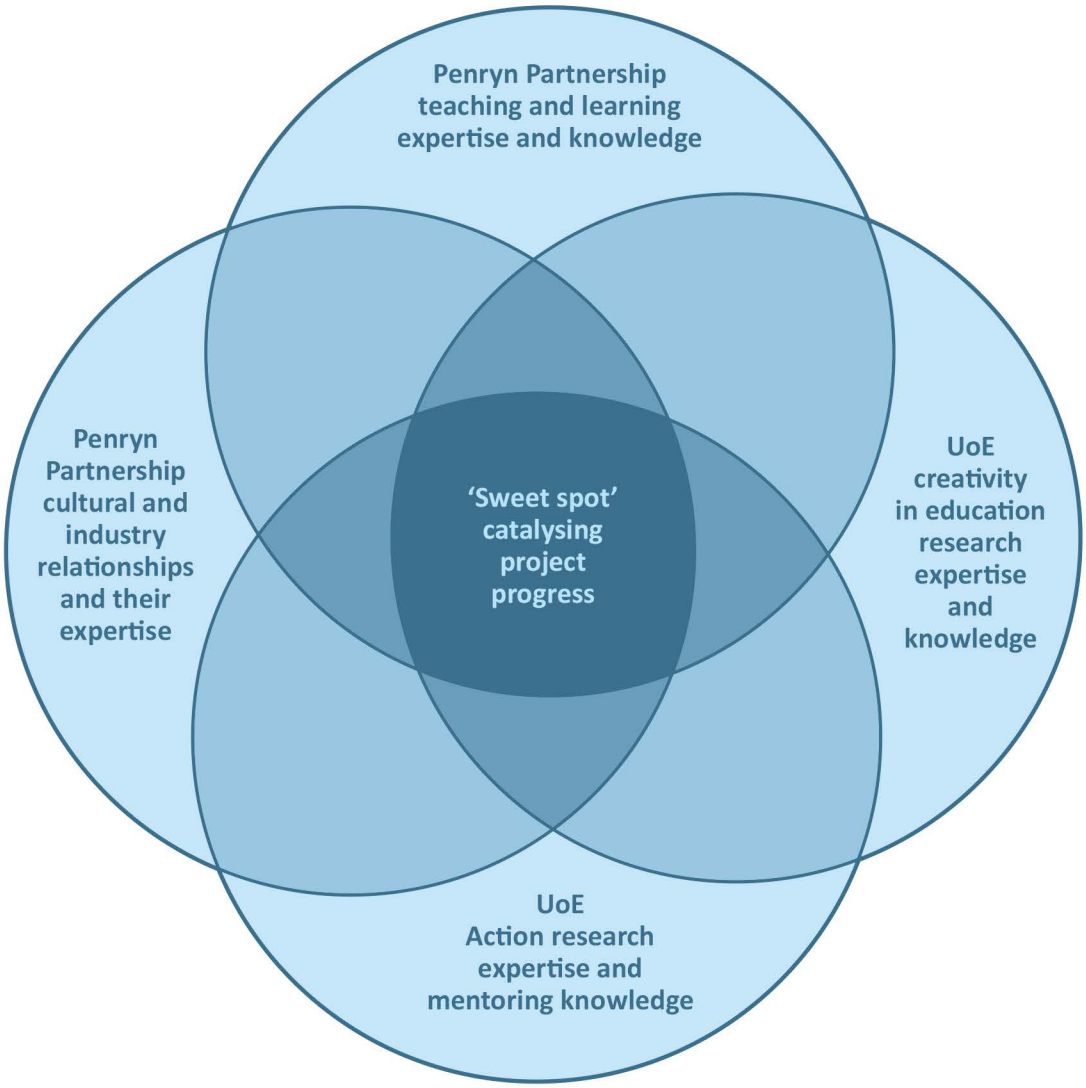


Figure 4: Penryn Creativity Collaboratives Partnership Model

The core team have come to understand that it is this combination of partnership heritage and partner expertise that has enabled us to catalyse PCC's rapid progress, on relatively little research resource in particular. This included establishing the Penryn College-University of Exeter partnership at the centre, which was time intensive and was not anticipated. This is an area for future consideration. Likewise, opportunities for interactions between the University of Exeter research team and overarching CC research were underdeveloped during Year 2 and leave opportunities for working together in more depth during Year 3. Networking issues for cultural and industry partners were also experienced and there were concerns as to future school partnerships' capacity to broker network relationships in the absence of Bridge Organisations and associated funding.

Discussion and Implications

Whilst definitions of creative pedagogies and creative skills have been represented and utilised as two separate multi-part frameworks in this project, they would both be better represented as an interconnected web, with each of the skills and pedagogies enmeshed and dependent on the others. Individual parts of each framework come to the fore at different times, but should not therefore be seen in isolation. Key discussion and implication points around this include:

- Tensions emerged between the requirements of assessment, a restricted and congested existing curriculum, and the development of creative skills.
- Teacher researchers perceived their own level of agency was lower at the end of Year 2 than the beginning. This was thought to be because student agency had increased, and teachers had gained awareness of the overall limits of their agency in everyday practice.
- The need for time was repeatedly noted in order for creativity to flourish, with implications for lesson, curriculum and assessment planning.
- The need to balance structure and openness, control and freedom, was repeatedly noted in relation to different aspects of pedagogy,
- Amongst the pedagogies, notions of 'risk, immersion and play' were widely discussed, and there was extensive commentary on students' skills in 'empowered action' which incorporates the skills of risk and immersion.
- Collaboration was the most pervasive pedagogical approach, being present in every action research project. Mirroring the dominance of this as a pedagogical strategy, 'dialogue and collaboration' was the skill most frequently commented on,
- Working individually received much less attention – perhaps due to the perception noted above that creativity was primarily a collaborative skill. Working communally received almost no comments as either a pedagogical strategy or a skill.
- Problem solving skills and addressing 'real-world' problems were included across a range of different action research projects, with teacher researchers noticing how this increased student motivation and impacted on empowerment.
- Attention to ethical dimensions of creative pedagogies, skills and processes received almost no attention.
- The Creative Pedagogies Framework was utilised effectively to describe teaching for creativity across the different projects, and there were multiple examples of how the pedagogies *manifested differently* in different subject areas. This will provide the basis for the Year 3 toolkit.
- There were trends in terms of age group and subject area in the reporting of different creative skills which can be used as the basis for work on the progression framework, especially in specific subjects in Year 3.
- Evidence for *progression* of the creative skills was mixed. Skills in which there was some commentary on progress or evidence of progress included: Question posing and responding, problem finding and solving, reflection, understanding rules and consequences, persistence, empowered action including in risk taking and taking action, play (but only at early years), possibilities, understanding diverse values and some very limited commentary on progression of imagination.
- Data on other skills tended to present the concepts more as an attribute of either the student or the activity, and thus there was less sense of progression offered in these areas which included: Dialogue and collaboration – particularly working collaboratively; negotiating difference and responding appropriately; immersion; innovation; and considering ethical consequences.

Emergent issues

- Opportunities have been identified to explore assessment across the primary and secondary curriculum which could allow greater capacity to record and celebrate the creative skills.
- Student well-being received limited comments and wellbeing is an area that could be addressed in future research.
- The PCC partnership model is recognised as catalysing particularly rapid progress which is worthy of note for the wider dissemination and roll-out of the project.
- Scope has also been noted for development around research and partnership resourcing to maximise their potential.
- There were few comments from teacher researchers on the impact of teaching for creativity on young people's workforce readiness, the overall theme of Penryn Creativity Collaborative. This reflects a step back from this question in year 2 of the project when the focus has been more directly on classroom practice. It will be a priority for year 3 to bring together the progress in teaching for creativity made this year with the overall research question: How does teaching for creativity across the curriculum lead to young people who are better prepared for their future in a changing workforce?

To read the full report please visit:
https://penryn-college.cornwall.sch.uk/creativity-collaboratives

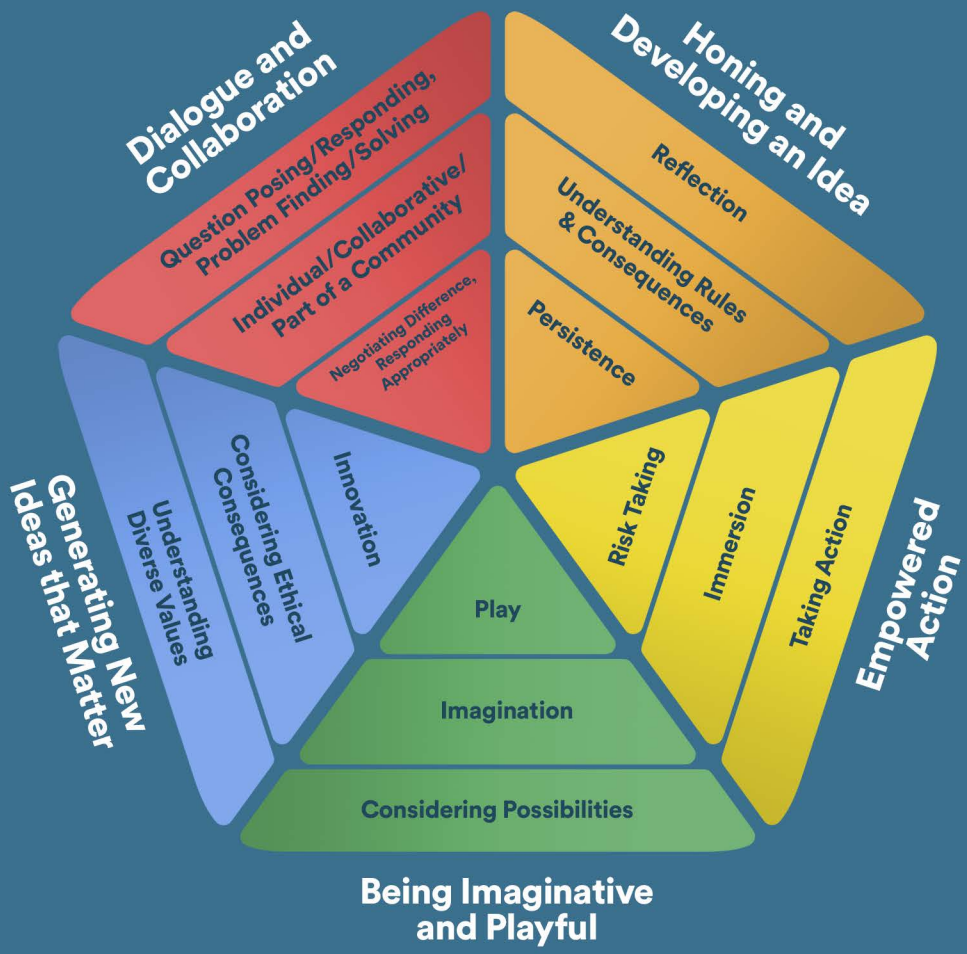
To cite the report please use:

Crickmay, U. Childs, S. Chappell, K. (2023), *Preparing for a Creative Future: Year Two Report Build and Test*
https://penryn-college.cornwall.sch.uk/creativity-collaboratives

Creative Skills

PENRYN PARTNERSHIP

"Does teaching creativity across the curriculum lead to young people who are better prepared for their future in a changing workforce?"



Penryn College "Achieving through Challenge"

University of Exeter

Supported using public funding by ARTS COUNCIL ENGLAND

Freelands Foundation