

Utilising the Entrecomp Framework, critically evaluate your own creativity and enterprise skills and consider how you might be able to develop the creative and enterprising skills of primary learners through your own pedagogy?

Within this assignment, I will critically evaluate my own creativity and enterprise skills through the use of the Entrecomp framework. Using the found knowledge I will then recommend areas and ways to develop the creativity and enterprising skills of primary learners.

Firstly what is creativity, there are many different definitions of creativity however within this assignment to fully utilise the Entrecomp Framework the definition that would be provided from the descriptors within said framework. This means creativity is the ability to develop several ideas and opportunities to create value, including better solutions to existing and new challenges. In addition to the ability to explore and experiment with innovative approaches and combine knowledge and resources to achieve valuable effects. (Bacigalupo, Kampylis, Punie, Van Den Brande 2016)

To fully understand creativity we must breakdown the description in order to see the full picture. Creativity is a hot topic in Welsh education systems. (Donaldson 2015) has created a list of recommendations to ensure children within Wales have successful futures. Donaldson has also determined four main purposes for the curriculum reformation, one of which is to create enterprising creative contributors. Within the description, it mentions developing several ideas. This links to the process of divergent thinking a term coined by (Joy Paul Guilford 1966) However it is more commonly known these days as lateral thinking. Lateral thinking is preferred by De Bono 2006 as lateral thinking is specifically defined in system terms which means jumping across from the one main idea to a second side idea. Which in hindsight allows you to link up with the original main idea. Thus resulting in a solution that would not have been found without crossing thinking processes making links. as a result of this, lateral thinking is often connected to problem-solving. Beginning with a question and creating many possible ideas for solving the problem or answering a question. This is firmly believed by (De Bono 2006) and backed by (Barnes 2015) with his interdisciplinary approach to cross-curricular learning where two subjects are creatively connected using skills and knowledge which results in a single result/finding.

Secondly to be creative the individual must create or add value. The question to be asked here is what is value-added, and what does it mean? Edward De Bono would argue that the creative idea must have value, many people mistake being different for being creative unless you can add value it is not creative. this suggests that simply thinking out of the box being lateral in your thinking does not simply mean value is added. Perhaps for value to be added we must find a suitable answer first to achieve value. However, De Bono does also bring forward a problem with society today he states People are reluctant to be creative in general because if you try out an idea and it doesn't work that is regarded as a mistake. He continues explaining that the issue with such thinking stems from language as we do not have a word meaningfully justified venture which did not succeed for reasons beyond your control. thus anything which does not succeed is labeled as a mistake.

The third part of the breakdown the ability to explore and experiment also links to the earlier argument made by De Bono that pupils afraid of mistakes are less likely to experiment and explore. People are scared to use divergent thinking. However in our world today there is a higher need for people with the ability to think divergently. Surely then it is important for us to change and begin to innovate, explore and experiment. This is the opinion of George Land, in his Ted Talk, The Failure Of Success he presents the idea of our world developing faster than we can keep up with despite us conditioning children to be less experimental and divergent with their thinking. This decline in the ability to effectively think divergently began with the introduction of schooling children. He claims that within our schools we attempt to teach pupils to think both in a divergent manner and convergent manner at the same time. The argument made is that of pupils being unable to use both vertical thinking and lateral thinking at the same time. (Baer, Kaufman 2006) agree with this view of the inability to use both divergent thinking and convergent thinking at the same time, however, they bring forward lots of evidence through additional studies cited by (Fasko 2001) that creative thinking and reasoning have a complex relationship, resulting in additional benefits when executed properly together. There are many theorists who believe that multiple approaches assist in problem-solving an important aspect of creativity (Bernardo, Gaerlan, Marianne 2011) have conducted many studies proving how multi-linguistic approaches can help problem-solving. Perhaps they would agree that as the use of multiple languages can aid problem-solving, the same result can be found with multiple thinking approaches. Furthermore within the descriptor for creativity within the Entrecomp framework, the collaboration of knowledge and resources is but another example of the importance of both lateral and vertical thinking.

Lastly, within our description of creativity, the subject of innovative approaches appears there are many views surrounding different approaches you can use to both aid pupils in being creative and encouraging pupils to be creative and take risks. The importance of both being creative and encouraging creativity is being introduced into our curriculum as we speak. (Donaldson 2015) is of the opinion that within his report Successful Futures he has outlined four main purposes for the need for a new curriculum. Within these four purposes, creativity is put right in the front around other purposes. Donaldson recognises that being creative, enterprising and ambitious learners have become three very important aspects of life, which is an opinion agreed upon by Land. (Costa Kallick 2008) Further this by adding "We are interested in observing how students produce knowledge rather than merely reproduce knowledge" Thus Costa & Kallick believe the creative process is often more important than the outcome. By this reasoning, they may believe that encouraging creativity is more important than the creativity themselves as children learn through experience. (McAteer 2012) would back this argument through the belief that "children learn through context and experience not by firstly mastering skills". Furthermore, the approach to education is important. Within schooling today we see mass amounts of Pedagogy. Pedagogy being how we expect children to learn today for them to read, perceive, memorise, solve problems. despite problem-solving, there is very little creativity within this approach to learning. As being shown by theorists and educators such as Land, De Bono and Guilford there is a need for pupils to be shown how to work under Andragogy. Andragogy more commonly seen in the education of adults focuses on the negotiation of knowledge. Knowles is seen as the educators who introduced Andragogy as we know it today. However, the discovery was full of issues Knowles definition of the word Andragogy simply translating to the art and science of teaching men or adults. Therefore people were disgusted when he suggested using Andragogy to teach children (Houle 1972), (London 1973) and (Elias 1979) argues that Andragogy only applied to adults by its definition and therefore had no place in childhood classrooms. (Knowles 1979) in conjunction with (McKenzie 1979) backed Andragogy by stating there is a significant difference between teaching Adults and Children. Furthermore, the introduction of andragogy does not mean that pedagogy is bad and andragogy is good. Knowles is quoted saying

“So I am Not saying that pedagogy is for children and andragogy is for adults, since some pedagogical assumptions are realistic for adults in some situations and, some andragogical assumptions are realistic for children in some situations” (Knowles 1979)

Thus Andragogy is for everyone However still not everyone is sure of this (Edwards Hanson and Thorpe 2013) still believes that Knowles’ work has “tended to muddy the educational waters” Within the entrecomp framework there are three areas within these three areas there are 15 competencies for entrepreneurial skill. Leading from these competencies there are 60 threads and 8 progression levels which result in over 422 learning outcomes Despite the framework being designed for entrepreneurial use. I will use the framework to evaluate skills in enterprise within the framework. For this reason, certain aspects of the framework will not be credible to elevate enterprise skills. One area which is essential is the competency of creativity upon which I will be evaluating my own creativity.

The Competencies I have decided to look at the evaluate my creativity and enterprise skills are motivation and perseverance, coping with uncertainty ambiguity and risk and creativity. Beginning with creativity there are five threads to measure myself against. the first thread is to be curious and open. Within this thread I have given myself a level of between four and five this means that I can actively search for new solutions that meet my needs and search for solutions that improve the value created. I have given my self this split score as I am aware that some ideas I work towards are successful and add value. Whereas some ideas may fail or nor reach the desired level of success. I thought it would be unfair to assume I am solely a level five as the working of the level five descriptor indicates that I should be able to filter out the bad ideas earlier before they reach development. In regards to actively searching for new solutions, I am confident in such a level as level four would suggest. I do struggle to think of others and perhaps will not have the drive to solve problems that do not directly affect myself.

The second creative thread developing ideas is slightly lower in my self-assessment reaching a level three. level three would suggest that I am happy to experiment with different techniques to generate multiple solutions to problems. This idea of fluency is not a problem I am able to think of many ideas to solve a problem however as discussed earlier often fail to see the possible solutions that will fail beforehand. In addition to fluency, I am happy to use resources available to myself, especially new technologies. However, I do not reach a level four as I rarely test my solutions with end-users as the vast majority of my problems are problems I myself deal with which others excel at.

The third thread tackles the ability to define problems and more importantly open-ended problems with many solutions. For this I have leveled myself at level four, this would suggest that I can reshape problems to fit within my skill set. This is indeed one the main and I find solutions using transverse operations and thinking of what the desired effect at the end of the problem is. However, I would not feel confident explaining in-depth approaches and strategies for problem-solving with the certainty that I could suggest a strategy that will work for this reason I was unable to give myself a level five.

The fourth thread is design value. As we have discussed in earlier argument the importance of value-added in imperative to creativity. However, through looking at the levels I decided to score myself at level four. This reason is because for the best fit to what I have already done not what I may or may not be able to achieve. I have used prototypes within my teaching and added to ideas following early successes and failures. However, as there have been failures, that have not always achieved the desired value. For this reason, I felt it would be wrong to give a higher level in this thread.

The final thread within creativity is to be innovative, Through my teaching practices, I have been made aware of the importance of innovation within the classroom as new technologies take over and new stimuli appear outside of school. I have allowed myself a level six for this thread as I am confident in my ability to describe the difference both breakthrough and transformational innovation.

In regards to creativity as a whole, I do believe there are many aspects for me to work on in the years ahead. However, I do believe I am on the right track over the last four years with the University of Wales Trinity Saint David I have made leaps and bound in both my knowledge of creativity but I have also been more creative during assignments such as assignments within the visual and expressive arts.

The second competency chosen for my evaluation is motivations and perseverance. As discussed earlier like creativity, learning is a process. Within the process of creativity, there are risks, later we will look at dealing with risk as a competency itself. However, motivation and perseverance are just as important, as discussed earlier the inevitability of failure pointed out by De Bono means many pupils and adults give up assuming that they have failed at the first hurdle. Highlighting the importance of perseverance included with this as seen in the competency of creativity motivation pops up in the view of achieving goals solving personal problems.

The first thread within motivations and perseverance is staying driven. This evidence would suggest that a level three fits the correct level for myself. This is because I am not always able to regulate my behaviour to stay driven. Additional support from others whether in a group focused task or working individually. However, I am motivated by goals and anticipate the feeling of relief or accomplishment after achieving my goal. Having said that the vast majority of my goals are extrinsic in nature which means my motivations can change from time to time. Secondly being determined is out thread focus. being determines and staying driven sound similar.

However, the thread of being determined mentions coaching others and helping others with their motivations. Despite this, I have scored myself a level of four in this thread just shy of the ability to coach others to stay motivated. This is because I sometimes struggle with my self ability to achieve. Despite the fact I can coach others to stay motivated, it would be wrong to jump levels. Thirdly being able to focus on what keeps you motivated I allowed myself level six due to my ability to keep the end goal in sight to solve a problem with added value. In my thought process, I often think of what the goal is.

The fourth thread of resilience is important due to the nature, where schooling had taught us that failed attempts are mistakes and therefore bad not learning blocks which we can learn from. Through looking at past summative assessment compared with my most recent summative assessment I do believe that I have shown the ability to overcome adverse circumstances. Therefore I believe the best fit within the levels for this thread is level six.

The final thread, don't give up brings back the earlier threads of determinations and focus. Within this thread I have allotted myself a level 6 this is due to the evidence of my ability to show passion and a strong sense of ownership for my creative ideas within the classroom. developing ideas which are new fun and add value to the learning experience.

The final competence used to evaluate my creativity is coping with uncertainty ambiguity and risk. As pointed out by (De Bono 2006) within creativity there are risks. (Land 2011) would further add that if we are unable to learn how to deal with these risks we will stop exploring the possibilities needed in the futures of pupils within schooling systems today.

Firstly in regards to how as a student-teacher I cope with uncertainty and ambiguity. Personally, I spend vast amounts of time reading articles and watching videos explaining the best pedagogical practices. As a result of the differing viewpoints and ideas, I must make informed decisions through both what I believe and what I'm taught through research. I must decide what techniques to try what models and approaches I should choose to tackle different situations.

I cope with uncertainty ambiguity and risk, aided by the knowledge that I am a trainee teacher I am aware that mistakes must be learnt from and not dwelled on. The level six descriptor best fits my ability to deal with ambiguity and uncertainty, I have learnt through my teaching practices to learn from my mentors and value their opinions despite uncertainties regarding best practice learnt from other educators. (Biesta 2015) argues that if the risks associated with education are taken out, there is a real chance that we take out education altogether.

As previously discussed there are some risks to be taken within a classroom. However there are also unnecessary risks, (Sievers 1984) bring an argument that would suggest that educators ask a set of questions to just if a risk is worth taking. Some of these questions include safety of the environment, the safety of students both physically and mentally, the benefits or success and your ability as a teacher to successfully conduct the actions. If this is so how do we deduce what risks are worth taking? Through previous training in sports coaching where continuous risk assessments were to be made I am capable of creating detailed risk assessment. I have used these through a number of PTE placements where either activities have been moved or adapted to reduce the risk of both failure and injury. For this reason level, seven appears to best match my ability to calculate risk within my second thread. This is due to conditions beyond my control changing such as weather.

Lastly the ability to manage risk, my best fit level for my ability to manage risk must be level five. This suggests that I am able to weight up risks and expected benefits to make decisions which in this context affect both my pedagogy and enterprise or creative skill. This I believe is shown in my ability to make adjustments within my planning to improve or add value to the teaching experience within classes. This includes both class management techniques I have to introduce or adopted into my practice. The reason level 5 is a bet fit for myself is, despite the fact I am happy to create a detailed risk assessment. I am unsure whether a management plan has ever been put in place to guide my choices. Therefore level six appears out of my reach at this moment in time.

The next process having now used the entrecomp framework to assess my level in creativity and a number of enterprise skills. The next question is based on how well the entrecomp framework is at evaluating creativity and enterprise skill. To do this we will look at another approach of measuring creativity to critically evaluate both methods. The method we will use for this assessment is the five-dimensional model of creativity by Spencer, Lucas & Claxton (2012). Within the model there are five factors or dimensions for assessing creativity, those are persistence, discipline, imagination, collaborations and inquisitiveness. Within each dimension, there are levels to suggest a level of competence in the dimension. Once all dimensions are complete the user can draw marks around each dimension in order to create, a picture of the individual's creativity. There are a number of similarities between each model, both allow for different levels of competence in each field, both use multiple dimensions or threads to create their result. Furthermore, both use similar topics against which to test for example persistence, discipline, collaboration and inquisitiveness. However the entrecomp framework is not designed to assess creativity, yet it does allow the assessment of both creativity and enterprise skills within the same framework. Furthermore, the entrecomp framework outlines steps between each level, while the five dimensions model provides the user with no prompts or criteria for each level. Thus the entrecomp framework appears to be a more coherent complete model. Despite its intended use within entrepreneurship its overworked nature for assessing creativity and enterprise skills makes it an excellent model to evaluate creativity and enterprise skill.

To look at the second half of the essay and the question how to develop the creative and enterprising skills of primary learners through your own pedagogy? In order to do this first, we must look at what's wrong the pedagogy today? Perhaps even what's wrong with my own pedagogy? It is clear through my evaluation of my own creativity that my creativity is not perfect. Therefore there are lots I do not know about creativity. (Naccce 1999) would suggest that I must use imaginative approaches to make learning more interesting and effective. (Guilford 1950) points out issues with this however as creativity is individual, thus is not improved across a class. This also doesn't back what we know through the entrecomp framework that collaboration and grouped creativity are important aspects of measuring competence in creative skill. Another interpretation of individual creativity is personal. If this is so should we be assessing levels of creativity amongst our pupils? (Black and William 2000) would have us provide formative feedback as they believe it enables pupils to develop their creativity more effectively. (McAteer 2012) Earlier pointed out that pupils must learn through experience thus baking Black and William in their need for assessment for learning to further pupils development.

Furthermore many educational theorists point out the importance of educational environments effecting pupils abilities to think creatively. (Naccce 1999) would argue that young peoples creative abilities are most likely to benefit in atmospheres where teachers creative abilities are properly engaged. (Frenkel 2012) makes an interesting point about Seelig's innovation engine regarding habitat. It is the opinion of Frenkel that habitat is placed outside of imagination but parallel to it as habitat is the externalisation of imagination. So we must build a learning environment to enhance our pupils imaginations and creativity. She continues to argue that the way we use both environments, knowledge & resources affects our imagination. (Onarheim 2015) argues that schooling today changes our ability to think laterally but instead we learn to think vertically.

Furthermore, schooling introduces us to an incoherent set of skills that affect our decision making because we follow these rules subconsciously, One example of these rules is often called functional fixedness. Whereby an object is only able to be used for its original intended purpose. Onarheim argues that these rules we follow introduced by the schooling process including the environment, disallow us to be creative. This view is backed by (Robinson 2016) who believes we are all born with the ability to think divergently. Furthermore, the more educated these children become the less their ability to think divergently is present this is further backed by Land who's study into divergent thinking which discovered that out of one thousand five hundred children aged three to five, the number of children who scored a level of creative genius was in the ninety-eight percentile. This test when ran again five years later dropped to thirty-two percent and would drop again another twenty-two percent in another 5 years.

There is further research to suggest that movement has a direct impact on creativity (Oppezzo & Schwartz 2014) discovered that walking both boosts creative inspiration during the act of walking but also for a short while after the activity. They discovered that while walking the brain emits Alpha waves which are often associated with being relaxed and now generating ideas. Therefore educators could deduce that pupils are more creative then relaxed. However, with all the risks associated with creativity, I can understand how some individuals might not be relaxed when asked to think of a new idea.

To conclude there are some recommendations I would make to develop the creative and enterprise skills of primary learners through the pedagogy of an educator. Firstly activities and tasks must be designed in order to snap learners out of allowing vertical thinking to rule their creative thought process. (Onarheim 2015) would back this recommendation, asking a pupil to be flexible and use fluency to find multiple used to adaptations to an existing product that adds value. despite the need for lateral or divergent thinking, we must endure there is a healthy relationship between creative thinking and more traditional schooling as both are important. This would perhaps be aided by models such as De Bono's six thinking hats where the wearer attempt to use different thought processes dependant of their current needs.

Secondly, pupils should be reinforced with the concept brought forward by De Bono of a time when pupils may see mistakes as fully justified ventures which did not succeed for reasons beyond their control. This is influenced by the teacher in a number of ways such as organising opportunities to experiment, positive feedback which does not make the learner feel at fault. Assessment for learning here is essential as pointed out by Black and William as it enables pupils to develop their creativity more effectively Furthermore I believe that teacher participation is key, teachers must show that it is okay to take acceptable risks and make mistakes.

Pupils should be allowed time to prepare for creative tasks as the educator following the introduction of a creative task encouraging pupils to brainstorm while walking before conducting their idea this idea stems from work of (Oppezzo & Schwartz 2014). In conjunction, pupils should also be allowed time to reflect on what happened prior to experimentations. Thirdly creativity should become apart of everyday activities, this may be during a choice activity within a foundation phase class or genius hour within a KS2 class.

Due to the nature of our curriculum changing currently, with the intention to place more importance on creativity. Primary school learners would benefit from tracked progress in creativity. The model I would suggest is a model such as the entrecomp framework as it manages to link both creativity and enterprise skills together. The importance of this is clear as it coincides with Donaldson's aim for us to both have enterprising & creative contributors, as suggested by his four main purposes for the curriculum reformation expected to begin integrations as early as spring 2022.

Lastly, educators should be afraid to adopt elements of andragogy into their pedagogy as seen by Knowles. Pedagogy has been lost in translations the skills we teach children are meant to ready children for their adult lives. Educators such as Land have shown us how schooling methods today do not appropriately prepare pupils for their futures. It is the responsibility of educators including myself to adapt and change, fostering new methods and ideology to ensure pupils are capable of adapting to the transitions with technology and knowledge as projected by theorists.

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