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Why does stimulating curiosity enhance learning in the early years?

Abstract.

The purpose of this research project is to discuss and understand why stimulating a child's curiosity enhances learning within the early years. Curiosity, according to Moorhouse (2021) is when there is a desire to explore and ask questions about something that has captured someone's attention. The appropriate sample for this research proposal will be a small group of children aged 4 and staff members within their classroom. Qualitative paradigms such as observations will be used to distinguish how and why children engage better when learning through play in an enriched outdoor area, where they have the freedom to explore and have access to authentic resources. Face to face interviews with teachers within the setting will then be carried out to find out how and why they feel children are engaging more/less with explorative play. The findings of this research will be used to help adults understand why and how children gain more purposeful and enhanced learning when having their curiosity stimulated. Quantitative research will not be needed during this research proposal as this is only used to find out numerical data, and this proposal is to find the reasons as to why does stimulating curiosity enhance learning within the early years? (Hennink, Hutter and Bailey, 2020). Triangulation, which is the combination of both research paradigms, will still be needed in this research proposal as both qualitative methods will still need to be combined (Noble and Heale 2019) The ethical considerations in this research process will ensure that all information and evidence collected during this time will be accessible to participants and stored correctly in a safe space (Metropolitan police, 2023 and University of Wales Trinity Saint David, 2023). Researchers will be familiar with all up to date legislations such as, BERA (2019) and The Data Protection Act (2018).

Key words: Curiosity, Early years, Outdoor play, Play, Quantitative, Qualitative, Triangulation.

Literature review.

According to Collins dictionary (N.D) curiosity is when someone has the desire to understand something. Moorhouse (2021) suggests that curiosity is noticing details and is what ignites the eagerness to play and explore, he believes that curiosity is at the centre of children's learning. Moorhouse (2021) also suggests that babies are all born with an existing want to find things out and explore the world around them. Oberklaid (2018) agrees with this and believes that everything is new to babies, and that from a young age, children want to explore the world they live in as they are naturally curious. He suggests that adults should ensure it is safe for them to be curious in.

Theorist Friedrich Fröbel believed that children are active and curious beings, who thrive when playing in enriched and stimulating environments, such as being outdoors in nature. For example, when children are gardening, they are learning how to problem solve, and through exploring they are learning about their five senses, touch, taste, smell, sight, sound (Twinkl, N.D). According to The University of Edinburgh (2023) Fröbel believed that it would have been easy to give children the answers they needed, however, to stimulate curiosity and encourage valuable learning, adults should allow children to explore and discover the answers to their own questions.

Robinson (2019) suggests that Jean Piaget also believed children should learn through exploring at every opportunity. Piaget encouraged the idea of play; he believed that the environment was a teacher and would spark children's curiosity. In a child's sensorimotor stage, between the ages of birth and 2 years of age, their focus would be mainly on their sensory experiences and motor development, therefore the child will create an understanding of the world they live in by physically interacting with it. Children in this stage will coordinate their sensory experiences with physical motor actions, for example, "What noise does this rattle make if I kick it?" It will also be noticeable that children will continually explore different possibilities with objects around them and explore the outcomes. (Fernandez, 2021).

According to Pichere (2015) Abraham Maslow's pyramid of the Hierarchy of needs suggests that when lower needs within the pyramid are met and are satisfied, the higher needs will then follow, and self-actualization can then be achieved. He

believes that unless basic needs and safety are met, curiosity and learning will not take place. However, Stoyanov (2017) suggests that through secondary research, self-actualization is based on what a person should be rather than a basic need. Maslow's hierarchy of needs is also criticised, as a human's basic needs do not always follow in the order of his pyramid.

The UNCRC (2017) suggests that children should be given the freedom to express their opinions, thoughts, and feelings in whichever way they feel appropriate. The Welsh Government (2022) agrees with this and has created the new curriculum that is dedicated to supporting the rights of the child, they believe that the environment a child learns in should offer spaces for children to self-regulate safely in and should be nurturing to the child's emotions and well-being. When creating an environment for children they believe that practitioners should consider the emotional climate within settings not just the physical spaces.

When children have access and the opportunity to play in environments such as the outdoors, learning can be authentic and purposeful, adults are able to observe children and support curiosity further by ensuring that resources are suitable and replenished regularly so that play is uninterrupted. Play can be open-ended and unstructured in the outdoors. By allowing children to play with natural resources, it can be cost-effective and usually, in constant supply. (Tinney, 2022, p-113-115).

Adults can support and extend a child's exploration and learning, by modelling curiosity and letting children know that they are interested in the things they are learning and asking open ended questions. By allocating time for curiosity and exploration children can develop courage to explore, wonder and to try new things. (Dombro, Jablon & Stetson, 2011. Sharp, 2022). Perry (N.D) believes that curiosity is crushed when there is absence, fear, and disapproval. He suggests that children will seek the familiar when scared and will remain in their comfort zone. When telling children "Don't", it can often lead them to feel that practitioners disapprove of their actions. And finally, when there is no invested and loving adult modelling behaviour to them, children have no one to share their discoveries with and will feel unsafe and insecure, thus stopping them from feeling confident enough to explore the environment around them. (Perry, N.D)

Methodological consideration.

According to indeed (2022) methodological research is a form of research that is legitimate and scientifically factual. The purpose of methodological research is to help the researcher create a plan and keep to it, helping towards a clear understanding of what they are researching. Faizan (2021) agrees and also suggests that methodology is the centre piece of a systematic process of research design.

The appropriate sample for this research proposal would be children and staff members within the early years. There will be two parts to this proposal, firstly primary data will be collected during a play-based observation of 6 children of 3 and 4 years of age. Primary data is when the researcher is collecting new information and data specifically for the research they are undertaking, whilst secondary data is data that is taken from research that is already published (Deakin University, 2023) The advantages of play-based observations focuses on child-led play and allows for authenticity of the child's strengths and can highlight any possible weaknesses, without the child feeling pressured into creating a show for the observing adult (O'Grady and Dusing, 2015, p25-38). However secondary research shows that often, the barriers to observing children during play-based activities have often been the opinions of the teachers, many suggesting that there is not enough time within the school day for free-play, and their worries of health and safety, thus not allowing children the freedom to play and explore in their environments and certain strengths or weaknesses being missed due to lack of play-based observations (The British Association for Early Childhood Education, 2021)

Observations will take place during the school day in an enriched, outdoor environment where children can play and explore their surroundings and have access authentic resources. The reason for this is as it is stated within the literature review where Tinney (2022, p-113-115) believes outdoor play can be unstructured and natural. Gurholt and Sanderud (2016) agrees with Tinney here and believes that playing in nature also opens the door to children's curiosity and exploration of their limitations. The Global Montessori Network (N.D) believes that when observing children, their natural intrinsic curiosity is being supported, it is also suggested that

through observation, issues within the environment or the teachings of the adult can be identified through reflection after observation.

Nguyen, Miller, Sunderland, and McGuiness (2018), argues that the disadvantages to observing children is that there is a possibility that the Hawthorne effect may be displayed. When children are aware that they are being observed, they may begin to act differently to conform to what they believe to be socially desirable. According to Practical Psychology (2022) The Hawthorne effect is also known as the observer-expectancy effect. They believe that a person's behaviour is modified when they feel they are being observed, and it is due to this that often the results of this research can be inaccurate. A way to avoid this from happening, is to allow observation to take place in a natural environment to the participants and to also ensure that when observing, there is no researcher physically present taking notes. (Practical psychology, 2021).

The second part to this research proposal will be individual video interviews with 4 staff members within the setting, to understand why they believe stimulating curiosity can enhance learning in the early years, and the difference they have seen in children since adapting their settings and teaching methods to coincide with the new curriculum to promote curiosity. The questions within the interviews will be open-ended questions as Albudaiwi (2017) believes that when questions are open-ended and do not offer a multiple choice of answers to participants, researchers gain a truer reflection of the opinions and feeling of the participants. This is believed to give the data further credibility than that of forced-choice or closed-ended questions. In order to ensure a successful, genuine outcome to these interviews the key is to have good communication during the interview. Participants should feel listened to and empathised with, and questions should be purposeful and sincere (Alda, 2019). Oltmann (2016) believes that the interview process should be carefully thought out and the type of interview that is conducted should be considered in great depths. For example, when carrying out this type of qualitative research paradigm, if the interview was done via telephone, then the researcher could miss non-verbal communication signs and may also not understand the context in which things are being said.

Doody and Noonan. (2012) suggests that the disadvantage to holding interviews is that often when recording the data, researchers begin taking notes when the participants are talking. They believe this can cause the participants to feel uncomfortable and researchers can miss out key information when the participants are talking. To conduct an appropriate and successful interview they believe that deciding on the correct method and planning out the process can help, along with ensuring interviewing skills are developed prior to undertaking it, (Doody & Noonan, 2012).

According to Asan and Montague (2014), when using video recording during interviews it can eliminate possible challenges that may occur, such as capturing every detail in a live setting. By video recording interviews it enables research to verify any observations they have undertaken. However, they also argue, that when using this type of technology, researchers must have knowledge in this field to ensure that the correct equipment is being used and how to adjust things such as video quality and sound settings if needed.

When conducting research, the 'Halo effect' according to Forgas and Laham (2016, p.276), is a cognitive bias where a person's positive traits during a first encounter form an overall impression of the person, overlooking any negative traits. Liao (2021) believes the halo effect can generally be seen in education, he suggests that teachers may use pupil assessments to form an overall impression of them as each individuals' abilities and talents can often be hard to evaluate or obtain. To avoid being influenced by the halo effect during this research project The Decision Lab (2023) suggests cognitive debiasing techniques can be used, such as taking time with the reasoning process and being conscious about the halo effect during any observations or interviews.

Taking the sample into consideration and the research question of 'Why does stimulating curiosity enhance learning in the early years?', The methodological paradigm that will be used for this research proposal will be a qualitative methodological approach, as opposed to a quantitative methodological approach. The reason for this is because, according to Hennink, Hutter and Bailey (2020), qualitative research is an appropriate method to use when researchers want to gain knowledge and understanding, explaining and identifying behaviours and actions of

a small number of participants within their studies, whereas quantitative research is the act of collecting numerical data, (Muijs 2011, p-2) Watson (2015) agrees with Muijs' (2011) research and believes that the purpose to quantitative research is to gather data using measurement and to analyse the data obtained to discover trends and patterns, this therefore will not be appropriate to use for this research proposal as the research is to find out how and why stimulating a child's curiosity can enhance their learning within the early years.

The advantages of using a qualitative paradigm within this research proposal is that it will give insightful and factual reasons to researchers, for children's behaviours and learning mannerisms when exploring and learning the world they live in when curiosity is being stimulated. Using qualitative methods also allows researchers to explore the answers to questions that are unable to be put into numbers. Human experiences are further understood when qualitative research is performed (Cleland, 2017).

Triangulation is the combination of methods used during research, it will take place when data from the quantitative data and qualitative data are combined and analysed. Triangulation helps overcome biases that arise during research and helps to generate an educated conclusion, would be used in this research proposal if both quantitative and qualitative paradigms were being used (Noble and Heale 2019). Abraham (2018), agrees and suggests that triangulation helps to improve the outcomes of research. However, the challenges that arise with triangulation is that it can be time consuming and with such a vast amount of secondary research that is already available, research can often contradict itself (Rugg, N.D).

Although quantitative methods are not being used to gather evidence in this research proposal, a form of triangulation will still take place when combining the results of the observations and the interviews, however as it is only qualitative methods being used, to ensure the halo effect does not occur during the observations or the interview process, researchers will ensure that they are fully aware of the meaning and effects of the halo effect and to know the signs for this. They will also take time to carefully consider the reasoning process before coming to any conclusion.

Ethological Consideration.

Resnik (2020) suggests that ethics is having the ability to distinguish between what is right and what is wrong, he believes that most people consider ethics to be something that is learned in the home or at school. Resnik (2020) also proposes that although most people see ethics as common sense, it can differ with each individual due to the way others recognize, balance, and apply them. However, ensuring practices are ethically carried out within the early years can be challenging, therefore it is advantageous to look at ethics as an ongoing process when working with the early years. There is a greater need when carrying out research with children to listen to their wants and needs throughout the entire process to obtain true ethical practice (Hodgkin and Beauchamp, 2019, p28).

The NSPCC (2023) believes that when research is carried out with children, those conducting the research have a responsibility to balance the child's safety, well-being, and their rights with the aims of the research. They suggest that in order to protect children and conduct research ethically it is recommendatory to make sure that all children have consented and are well informed about the research that is being conducted and for the children to know and understand what is expected from them.

Researchers are also to be reminded that when carrying out ethical practices during the research process they should respect the views of the children involved, making it their duty that children have the opportunity to share and express their feeling, views and wishes with things that affect them directly and indirectly. Researchers should take their views seriously and always have the best intentions for the children and their needs at all times. Children must be the highest priority (UNICEF, 2017).

During research it is ethically sound to obtain consent from all those involved with the process. However instead of simply asking participants and their parents (for children) to sign consent forms, researchers have a duty of care to share all information with regards to the process so that they are able to make an informed decision as to whether or not they would like to continue being part of the research (economic and social research council, 2023). As well as having informed consent, all participants have the right to withdraw their consent at any time during the research process. Both children and adults have the right to revoke consent whether

they have a reason or not. All participants should be informed that they are able to withdraw consent if ever they feel they no longer want to participate at any stage of the process, even if the research is almost nearing the end. It is advised that researchers should provide contact details to participants and their guardians so that they can contact the appropriate person should this situation arise (Ofsted, 2019).

University of Wales Trinity St David (2023) believe that ethics within research enhance qualitative research outcomes, it also protects participants to ensure they are less likely to be exposed to any mental and physical discomfort whilst carrying out the research. They suggest that by ensuring ethical standards and procedures are maintained, then the researchers' rights and welfare are protected whilst carrying out appropriate investigations. The University of Edinburgh (N.D) agrees with this and believes that ethics are forms of practices that guarantees research is being conducted to the highest possible standards in accordance with national frameworks, maintaining minimal risk of adverse outcomes to the research participants. They suggest that research that is conducted ethically is reliable and that conflicts of interest are avoided as they are easily identified.

Schweiger (2019) believes that there are safeguarding implications when it comes to researching children with vulnerabilities such as living in child poverty, he suggests that children's well-being can be threatened when suffering child poverty and then being under observations, therefore it is imperative to protect them by understanding their situations and safeguarding them from any potential harm they may face due to the research process. Stogsdill (2019) believes other factors including all forms of abuse can dramatically alter an individual's ethics, and that morality is a process that is ongoing throughout life, however researchers have the opportunity to model impactful and positive experiences with the research process, that does not negatively impact on to both adult and child participants.

When ensuring safeguarding guidelines are being met during research, it is best practice to draw on secondary research from other projects, this practice allows researchers to make informed decisions. When working with others it is always in the best interests of the participants to work effectively and securely with these partners to meet their protection needs to those that may be at risk of vulnerability (Wales Safeguarding Procedures, 2023).

Voltelen, Konradsen and Ostergaard (2017) believes that researchers should allow participants the choice of joint or individual interviews, and also allow them the flexibility to change their minds at any part of the process if they wish. At all times during the interviewing process, researchers should be mindful that if they do not offer this flexibility and that all parties are not aware of this then this could affect the outcome of the interview, as some participants may feel uncomfortable to be honest when others are present or possibly feel intimidated and isolated if they are alone, altering their opinions.

Farrimond (2017) suggests that due to children acting to social conformity during research, it is ethically correct to conduct research 'with' the child rather than 'on' the child, so that the end result is a true reflection on the participants. However, she argues that although this is advised, the content of what is being researched is always initiated by the researcher in order to come to their conclusion. This could cause ethical risk, where the children or adults may not fully understand what the content is, or there is a breakdown in communication, resulting in a strain on relationships between researchers and participants (Farrimond, 2017, p75.).

Once all evidence has been collected and triangulated, it needs to be stored safely and ethically, in line with latest legislations. According to the Data Protection Act (2018), any confidential data and evidence should be handled appropriately to guarantee protection against unauthorised access, loss and damage. It is also good ethical practice to only keep this evidence for the time that is necessary. The data controller, which will be the researcher, must adhere to the laws of the data protection act and allow full access to any evidence or information to all participants whenever they see fit to request it (Metropolitan police, 2023) Research data such as Still images, Videos, Audios and computer logs or emails that are collected during this time will be stored in password protected files, on a password protected device. This device will be stored in a locked cabinet in a locked room to ensure paramount safety. All names will be removed from files and initials and dates will be used to help protect the identity of those involved with the project. The only person with access to these passwords will be the research leader. All researchers involved with the research proposal will be kept up to date with all policies and procedures in line with Data protection (University of Wales Trinity Saint David, 2023).

The British Educational Research Association (2019) also known as BERA, agrees with the data protection act (2018) and helps to ensure practitioners who are conducting research within education carry themselves in a professional manner that reflects of BERA's ethical values and visions. By following their guidelines during planning, undertaking and reflection of research activities, all who are involved are able to identify any ethical implications as they arise. BERA expects its researchers to be conscious of inequalities such as disabilities, sexual orientations, and possible religious views of participants.

Conclusion.

In conclusion, qualitative paradigms of observations in an enriched outdoor environment, that is filled with authentic and natural resources with a small group of children and video interviews with teaching staff will be undertaken to find out how stimulating curiosity can enhance children's learning within the early years. Triangulation will take place to combine all evidence collected to help form an outcome to the research proposal question. Researchers will ensure ethical practices take place that will safeguard those taking part, and all evidence will be stored correctly in line with data protection legislations. All researchers will also be knowledgeable about up-to-date legislations regarding safeguarding and data protection. Participants have the opportunity to access any information about themselves and are free to withdraw consent at any time throughout the research process.

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