

# Learning theories and comparison education essay

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This work will concentrate on the theories of learning and development: firstly will look at the main principles of Behaviourism in general and Constructivism as described by Jean Piaget and Lev Vygotsky, then it will focus on the impact of these theories in classroom practice, curriculum and child. Although the theories overlap in different ways; they are still individual in their own right and should be treated as separate approaches which in turn is helpful to understand the classroom practice.

## **LEARNING THEORIES AND COMPARISON**

In behaviourist view, learning is a passive process. With its focus given to the observable behaviours rather than mental activities, behaviourist theorists define learning as; " what people do in response to external stimuli" (Elliot, 2007, pg 46), therefore learning is nothing more than the acquisition of new behaviours. According to Skinner, knowledge is not used to guide human actions; it is the action itself (Skinner 1976. p152). Behaviourists argue that as the intrinsic motives cannot be observed, focus should be given to the observable indicators such as extrinsic behaviours (Wray p42). Behaviourism suggests that in order to learn, active engagement of the learner and reinforcing learning with rewards instantly is essential. (Sotto, 2007: 35). When the reward is satisfying, it strengthens the behaviour thus learning, and punishments, weaken behaviour (Skinner 1974 cited in Elliott 2007 pg 48). So, if a child is rewarded for their desirable behaviour it's very much likely that they will repeat the desired behaviour. Skinner also urged educators to focus on reinforcements and on success rather than on punishing failure (Pritchard, p11). Hence reward systems are important in this view, even in the simplest form of a nod or thumbs up by the teacher for

correct answer. In teacher Mr A's practice, reinforcement of the desired behaviour takes place by an established and effective reward system in the classroom. The teacher uses a reward system for classroom management and improving achievement. Children are aware of the reward system; ten "Fantastic" tickets leading to extra five minutes of golden time as well as the punishment; being on red means losing privileges. Mr A uses traffic lights and platinum star as an effective reward and punishment system; where children can be rewarded for going up on the traffic lights for good work/behaviour as well as losing privileges for going down on traffic lights. Behaviourist learning is broken down into small, progressive sequences of task with continuous reinforcement given during the learning process; it advocates that without the reinforcement, the learned responses will become extinct. The system relies on continuous repetition and "skill and drill" exercise. Although the learners are actively doing things, in the learning process they are the passive receivers whereas teacher is seen as the transmitter of the knowledge to the learner. Subject expertise can be transmitted in a coherent, ordered and logical way and children are expected to listen (Polard et al, p144). According to Skinner (1976), the point of education is to present the learner with appropriate repertoire of behavioural responses to specific stimuli (skills) by consistent repetition reinforced by rewards (p161). Pritchard argues that although it might be a welcomed way to practice skills (rote learning) for some, it could be frustrating for some others as they won't understand the logic behind it and they are not motivated by the rewards (Pritchard, pg 11). Farnham-Diggory also criticised the behaviourist theory for the lack of understanding of what learning, individual's own learning in particular, really involves (Farnham-Diggory, <https://assignbuster.com/learning-theories-and-comparison-education-essay/>

1981, p60). Pritchard's concerns are transferred into real examples in Mr A's classroom, where some children are motivated by the reward system and are more comfortable in rote learning, some higher achievers in this class lose interest after a while because their inquisitive nature is not stimulated. This takes us to the matter of differentiating the work. It is now widely accepted that the classroom exercise should be organised to meet the needs of the individuals ( ref??) National Curriculum (2000) also states that, suitable challenges should be set for the abilities of individuals. In order to meet the needs of both groups of children Mr A can set up different activities throughout the lessons where the children can satisfy their inquisitive nature which than linked onto the rote learning. For example in the intro a discussion and brainstorming can be followed by children's research for the main learning focus which than supported by the explanation and practice of the actual theory. In a behaviourist classroom children do not have the autonomy of choosing their activities. All children are required to do the same activity as the rest of the class and work at the same pace as the rest of the class. This will then cause issues in planning and delivering the lessons at the right level to children's understanding as there are number of differences between pupils which may influence teaching and learning (Kyriacou, p79). In the new National Curriculum the emphasis is given to more traditional learning techniques, in particular, for learning of mathematics. A recent research from the University of Oxford led by Professor Peter Bryant opposes to the renewed focus on traditional learning techniques - supported by the government - is illogical; learning arithmetic, it says, is not as important as learning how to think mathematically (TES magazine, July 2012). According to the study, mathematical reasoning and <https://assignbuster.com/learning-theories-and-comparison-education-essay/>

arithmetic did make independent contributions to the prediction of mathematical achievement; mathematical reasoning was by far the stronger predictor of the two and they were more strongly linked to mathematics than to science or English. The study suggested that it is justifiable to make a difference between mathematical reasoning and arithmetic skills and schools must plan explicitly to improve mathematical reasoning as well as arithmetic skills (TES magazine, July 2012). In Mr A's practice, it is possible to observe the traces of "rote" learning in the Mathematics lessons. Teacher led skill and drill activities such as learning basic fractions by heart results in children not being able to explain their actions. For example most children are able to solve problems on their worksheets. However when they are asked how and why they followed that particular route they are unable to explain the logic behind their actions. Child C is in year 6 and is a lower achiever. The delivery of Mr A's maths lessons are aimed at the medium and higher achievers and are based on whole class introduction followed by text book and worksheet activities. C is given extra booster sessions with the TA however also in those sessions he is not supported by any resources that might help him to understand the subject, for example having fraction magnets as visual support. Critics of the behaviourist approach claim that rewarding all learning is likely to cause the child to lose interest in learning; children who are well motivated in particular (Pritchard pg10). Furthermore, positive response to praise followed by learning cannot be predetermined in every example (Sotto, 2007, pg 35). Moreover, using reward system or giving one child increased attention may have a detrimental effect on the others in class (Pritchard, pg 10). Another one of the most important factors of the behaviourist education is teachers, thus their subject knowledge. Good <https://assignbuster.com/learning-theories-and-comparison-education-essay/>

subject knowledge is vital for a behaviourist teacher. The recent education policy reflects the importance of the good subject knowledge for teachers in the new teacher standards (DFE, 2012, pg 7). Undeniably it is important for the teachers to have sound subject knowledge for effective teaching; counterargument for that would be that, concentrating on the subject knowledge extremely could cause further issues. Pollard suggests that the most likely difficulty may arise when connecting with the existing understanding of children. Furthermore this problem will become more acute when large groups are taught as it is difficult to teach the lesson appropriately for all learners (p145). The strength of subject exposition can also be weakness if a child doesn't recognise subject division as relevant to daily experiences which can lead to reduction in motivation and achievement (pollard, p145). Linking this idea to the differentiation, Mr A uses different topics in alternating sequences. He relates those topics mainly to the activities in literacy and history. He admits that his subject knowledge on some of the topics he teaches is not up to scratch. He believes this is not total disadvantage as it gives him an idea to organise the teaching sequence from a similar point to children which leads to leaving rote learning methods to more investigative style of teaching. He then sets up group discussions and group work for children. It is generally agreed that behavioural principles cannot adequately explain the mental processes such as higher level skills acquirement for example, language development (Schunk, 1991). In contrast to the behaviourist ideas, a new approach led by Jean Piaget focused on mental processes rather than observable behaviours. According to Piaget, thought is an internalised action, which simply explains his view of the close relationship between the actions and thought (wood, p21). In his view,

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knowledge is mental and physical activities which creates mental maps (schemas) and they develop continuously as the individual has more experience of the world. There are two important parts in Piaget's theory; assimilation and adaptation of cognitive schemas and cognitive development stages. Piaget's cognitivist theory, finds its basis in the constructivist movement where individuals continuously construct their knowledge. For constructivists, learning is an active mental work, not a passive reception of teaching (Woolfolk, 1993). Exposure to new experiences is vital in order to develop cognitively. Therefore it is important to give children the opportunity to explore and experience for themselves. In order to develop knowledge, person goes through stages; assimilation, accommodation and adaptation. During assimilation stage, individual is exposed to the new information and absorbs it. In accommodation stage, the new information is adapted onto the existing schema. Therefore organisation of thoughts; improving skills and changing strategies are all results of accommodation (Bee&Boyle, p151). Sometimes there are differences between the environment and schemas. In that case there are two possibilities; new experience can add to or reinforce existing knowledge or it could contradict it (Pritchard, pg 19). This process of bringing assimilation and accommodation into balance is called equilibration which is a stable state where there is no longer a conflict between the new information and existing information (Pritchard). According to Newman et al., equilibration is a creative process of invention for Piaget who argues that direct instruction will inhibit the child's understanding, if instruction gets in the way of child's exploration (newman et al. 1989, p92)As a result of his research, Piaget come to a conclusion where he suggests that there are four stages of cognitive development which links to the child's readiness for the <https://assignbuster.com/learning-theories-and-comparison-education-essay/>

new schemas in learning experience. They need to be matched to the child's current level of understanding and children's interests are diverse and subject to change (C. Wood et al., 2006, pg 202). By the end of each stage children are expected to achieve the milestones of that stage. The first stage is sensori-motor; age 0-2, where infants begin to understand the environment through their actions and sensori information. In pre-operational stage; age 2-7, is seen as an egocentric stage where the child sees the world from their own perspective and not others and as they develop language skills their symbolic thought and imagination also begins to develop. Concrete operational stage; age 7-11, is when children start to develop logical thought about physical operations. They start to understand abstract ideas. The final stage in Piaget's theory is the formal operations; age 11+, children are now able to think abstractly and hypothetically. They can manipulate ideas, speculate and reason. As a result of their experiences, children construct and develop their skills and knowledge. This is a significant difference between the behaviourist and cognitivist views in terms of learning and knowledge. As we have seen above, behaviourists recognise knowledge as extrinsic and passively received range of behaviours whereas the cognitivists' outlook on knowledge which emphasises on the intrinsic motives and processes of knowledge and learning. Supporting Piaget's stages Kamii (1985, 1994, 2004, cited in Wood et al.,) argues that children are introduced the abstract mathematical concepts too early when they are not developmentally ready which leads to the absence of conceptual understanding. Instead she argues children should be left to reinvent those principles for themselves (1985, 1994, 2004, cited in Wood et al.,). Child C in Mr A's classroom is a suitable example to support Kamii's argument. As <https://assignbuster.com/learning-theories-and-comparison-education-essay/>



stated above C is an under-achiever. Maths is one of his weakest subjects. Although he is in year 5, he still struggles with working out calculations in column format. He cannot relate to the presentation of the mathematical problem. However when the same problem is presented in horizontal format, he is able to separate the units which helps him to calculate and find the correct answer. Although school policy follows the column calculation for KS2, Mr A allows children who he believes that are not ready to go onto the next stage to use the mental method. He believes that the children should be supported whilst they are working in their own pace. C and other children in the same stage monitored closely and are assessed every half term for their readiness to go onto the next stage. The role of the teacher differs from behaviourism in Piaget's theory as facilitator rather than the person who drills knowledge into learners via continuous repetition or rewards / punishments. As a facilitator, teacher provides essential resources and guidance during the process of assimilation, adaptation and accommodation stages of the learning. Montessori also shares Piaget's view of the role of a teacher as facilitator in her own practise where she advises teachers to follow the leads from children and organise and tailor the learning accordingly (online1). Unquestionably, it is not uncommon to see the influences of Piaget's developmental stages in today's education system. Early years and foundation stage in particular are the two places where children are given the opportunity to explore and develop their own schemas for the world around them. As a facilitator, teachers provide a variety of activities designed to promote exploration and discovery such as art, dressing-up clothing, building blocks etc (Berk, pg 256). The EYFS profile provides guidance on the developmental stages of children and what

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milestones they should reach by specified age (eyfs). Although Piaget's theory was widely accepted between 1950s and 1970s, following new researches into the child development opposition to his views started to appear. Margaret Donaldson is well known for her opposition to Piaget's theory. In her book "Children's Minds", she suggests that the tests and experiments Piaget expected children to accomplish have failed them, because the language he used didn't make sense to children. She then argues that if the correct language is used and the environment is arranged, children are more capable of doing things Piaget claimed they are not able to do and the gap between adults and children is not so great (online - tes). Recent researches into neuroscience have also dramatically changed the view of babies and their capabilities (Lindon, pg 13). In his theory Piaget suggests that babies acquire their understanding of the environment after birth(ref). However research shown that the rapid development of the human brain before the birth allows them to have experiences such as hearing parent's voice which than allows them to recognise it after birth (Lindon pg13). Another research (Lafunte et al., 1997) indicates that pre-natal learning might have effects on future learning. Study suggests that fetuses, who were exposed to classical music at 28 weeks onwards were more advanced than others in many motor and cognitive skills by the age of 6 months. Following Piaget's theory, Vygotsky, too, believed that learning is a social matter and he was very much interested in the way that children learn through interactions. While he shared some of Piaget's views; as a social constructivist, Vygotsky believed that the same biological or environmental factors may have different effects, depending on the people whom the child grows up with, both in terms of the culture of those people and their

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characteristics as individuals (Gupta, pg 33). Both Piaget and Vygotsky emphasised on the importance of relationships in social situations and active child, however, they differed in that biological concept of maturation. Piaget was criticised for being too strict about the developmental stages (ref), Vygotsky saw the culture as the more important factor in development and learning (Gupta, pg36). Also their descriptions of social interactions are very different: In Piaget's view, children had two relationships; with their peers and adults. The relationship with the adults in his theory is restricted and cannot develop mutually due to the unevenness of social power; nonetheless, they have an instructional value in learning; similar to the behaviourist view. The relationship with peers however, is based on co-operation that leads onto building new ideas and meanings that lead to problem solving, hence developing more schemas (Whitebread, p83). For Vygotsky, the asymmetrical nature of children's relationship with adults and more knowledgeable peers is the key to the cognitive development (Whitebread, p83). Vygotsky argues that it is vital for children to learn in a social environment, via instructions from the more knowledgeable other (MKO) (Wood, p26). According to this theory, children learn from their peers (the same age or of a higher age and developmental stage) and adults. The importance of potential for development is emphasised in Vygotsky's theory. Vygotsky talks about the zone of proximal development (ZPD) and proposes that abilities of a person on their own and abilities with help from MKO are different. He suggests that ZPD is only achievable with the help of MKO. It is important that MKO uses various means of communication to transfer their knowledge to the child (Urquhart, in Whitebread - pg 64). J. Brunner applied Vygotsky's idea of ZPD process into scaffolding concept and suggested that <https://assignbuster.com/learning-theories-and-comparison-education-essay/>

if scaffolding delivered by teacher throughout the activities; then the child's knowledge could be carried onto a higher level as he/she learn (Urquhart, in Whitebread - pg 64). Scaffolding is the means of assistance provided in the zone of proximal development, for example by structuring the task into small, understandable steps and communicating instruction in this form in order for a child to achieve success. (Urquhart, in Whitebread - pg 64). When child completes the learning process the scaffolds are not necessary and can be removed from the situation. Alongside this, it is also important to remember that all pupils learn to the different degrees. Therefore where children learn more in their ZPD they do not need the scaffolding as much as some others (Vygotsky 1987, pg 116). The potential of improvement moves with an individual through life, and, in theory, full development can never be reached. Vygotsky's theory is fundamentally different from other stage theories due to its nature of giving development an infinitive limits (Huitt and Lutz, 2004). Cognitivist theory like behaviourism emphasises the role that environmental conditions play in facilitating learning; instructions, demonstrations etc. similarly, emphasis is placed on the role of practice with corrective feedback (ref 3). The effects of Vygotsky's theory are highly observable in today's classrooms in the forms of group work/discussion and mixed ability groups. In Mr A's classroom, mixture of the learning theories is observable throughout different lessons. In subjects such as Maths, the teacher uses more behaviourist approach where children are sat in rows, they are made aware of the learning objectives and listen to the instructions which then followed by the workbook exercises. They regularly undertake summative tests to assess their learning. Although the children do make progress and are able to tackle the problems they lack the understanding of

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the processes they go through whilst doing the exercises. Individual work based on textbooks is dominant in terms of activities. The biggest criticism for this approach would be that; even though children do not get chance to work in groups and learn from each other via collaboration; they copy each other's answers without understanding the methods. They are praised by Mr A for correct answers and for their efforts if the answer is not correct. Children are encouraged to give it a go rather than having the " I can't do" attitude. Carolyn Dweck argues that children should be praised for their efforts rather than how intelligent they are. Following her research on the effects of different approaches of giving praise she found that the children who are praised for being intelligent were less likely to take risks and tended to choose the tasks they knew they could get good results, on the other hand, children who were praised for making an effort intended to try different tasks and challenge themselves (Pound, pg25-27). Pupil C in the observed school is a suitable example to support Dweck's theory. In the beginning of the term his attitude towards the work was negative. Following Mr A's strategy to praise his efforts, C now started to " have a go" at different activities rather avoiding the work. On the other hand in topic based literacy and science lessons, creative curriculum approach is used and cognitive approach is adopted where the activities are based on group work and experiments. Throughout those activities children interact with each other, exchange ideas and opinions. Also the hands on nature of the activity allows children to understand and find answers in real life situations.

## Conclusion

Snelbecker(1983, p8)urges individuals to examine basic theories on learning and select those principles and conceptions which seem to be of value for one's particular educational situation. It is important that teachers integrate different aspects of different theories into their classroom environment.

Different needs and abilities of each child will require to use different approaches therefore we cannot say that the leaning theories will improve learning in any given scenario (Sotto, 2007: 127). Sotto proposes that in order to get the best out of the learning theories and allow them to improve the effectiveness in the classroom, teachers should use them simultaneously and should concentrate on the benefits rather than limits of each theory

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