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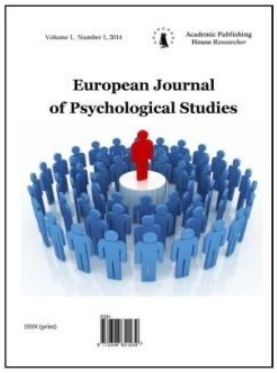
Published in the Russian Federation
European Journal of Psychological Studies
Has been issued since 2014.
ISSN: 2312-0363
E-ISSN: 2409-3297
Vol. 4, No. 4, pp. 174-180, 2014

DOI: 10.13187/ejps.2014.4.174
www.ejournal12.com



Relevance of Skinner's Theory of Reinforcement on Effective School Evaluaution and Management

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Abstract

B. F. Skinner's theory of reinforcement emphasizes on the relevance of reward and punishment. This has impacted, to a large extent on the promotion of teaching and learning. In effect, Skinner's theory has been applied often in most educational institutions. Students' educational outcomes can be improved upon on the basis of positive reinforcements. This paper therefore, examined the relevance of skinner's theory of reinforcement on school evaluation and effective school management. The paper applied psychological and sociological methodology in its research design. There is immense value in reinforcement (positive or negative) as a means of feedback to students, teachers and administrators. It is recommended that adequate feedback should be given to teachers to improve their output. And learners should be rewarded in order to improve their educational outcomes.

Keywords: Effective management; Reinforcement; Relevance; School evaluation.

Introduction

The focus of this paper is the relevance of Frederic Skinner's behaviourist theory on school evaluation and effective school management. The basic aim of education is the effectiveness of teaching / learning. The Classroom management theory of Frederic Skinner is said to have been incorporated in the school system in various ways. Most of the behaviour management systems applied in schools are said to be strongly influenced by his work. He argued in favour of "immediate praise, feedback, and / or reward when seeking to change troublesome or encourage correct behaviour in the classroom." Skinner also advocated for teachers to identify and reflect on the environmental effects on students' behaviour" (Wikibooks, 2011).

Skinner's operant conditioning in education has five educational innovations attributed both directly and indirectly to operant conditioning principles. They include: (i) Instructional objectives, (2) Programmed instruction (and its offshoot, computer-assisted instruction), (3) Mastery learning, (4) Contingency contracts, and (5) Applied behaviour analysis. Operant conditioning works on a system of reinforcement and punishment. Reinforcement is meant for behaviour to be

increased, while punishment should be used effectively. This means that the right guidelines for punishment should be followed (Behavioural Theory, 2011).

The teaching / learning process in the school can be positively enhanced if the actors (in this context, the learners, administrators / principals and teachers) are adequately motivated through rewards. This can be catalyzed through a consistent process of reinforcement. Akinboye (1992) in Omomia (2008) argued that reinforcement is a central concept in human acquisition of skills and performance competence. The skills / tools for teaching, learning and administration are thus sharpened through the process of reinforcement. By extension, it could be argued that reinforcement is any "factor which when made to follow a response immediately will increase the probability of the occurrence of the response to a conditioned stimulus or stimulus event" (Oladele, 2004; Adenigbade, 1997; Akinboye, 1992; Chauhan, 1992). The direct implication is that any "consequence that follows behaviour must be contingent upon the behaviour (Elliott, Kratochwill, Littlefield-Cook and Travers, 2000).

In applying Skinner's theory in the classroom, we can do the followings: "set up reinforcement schedules with our students, especially those with behaviours that need quick intervention to reinforce positive behaviour. For example, if a student gets out of his seat frequently, we can set a timer for, say ten minutes, and each time he remains on his seat after that duration, a token (reward) is given to him. Another example is the creation (in some occasions with the contribution of students) of a system of positive incentives for the class. This could be by rewarding positive behaviour before punishing negative behaviour. For example, if students are asked to turn in their home work, you reward those who turned in their home work consistently. Those who did not turn in their home work, even without being punished will likely be induced to follow suit with those rewarded for turning in their homework consistently. It is suggested that positive reinforcement should be immediately applied so as to easily associate it with the positive behaviour being rewarded.

The theory of B.F. Skinner could be said to be different from that of his predecessors who based theirs on classical conditioning. On his part, he studied operant conditioning. That is voluntary behaviours used in operating on the environment (Mergel, 2011). According to him, he based his operant conditioning on the following mechanisms:

(i) **Positive Reinforcement or reward**: Responses that are rewarded are likely to be repeated. For example good grades reinforce careful study.

(ii) **Negative Reinforcement**: Responses that allow escaping from painful or undesirable situations are likely to be repeated. For example, being excused from writing a final examination because of good term work.

(iii) **Extinction or Non- Reinforcement:** Responses that are not reinforced are likely to be repeated. For example ignoring student's misbehaviour should extinguish that behaviour.

(iv) **Punishment: Responses** that bring painful or undesirable consequences will be suppressed. But they could reappear if reinforcement contingencies change. For example, penalizing late students by withdrawing privileges will likely stop their lateness (Mergel, 2011).

In other words, the deep assumption of the theory of behaviourism is that "behaviour is determined by a desire to gain positive reinforcement and to avoid negative reinforcement." The consequence is that, "positive reinforcement tends to cause behaviours to be repeated. While negative reinforcement motivates behaviour in the attempt to remove or avoid some undesirable effect" (Grice, 2011). On their part, Giffith and Hamza (2006) had argued that "behaviourism is primarily concerned with the consequences of behaviours that are tangible and observable responses or behaviours. Five fundamental steps guide the behaviour change process under the behaviourism guidelines:

(i) Set behaviour goals
(ii) Determine the appropriate reinforcers
(iii) Select procedures for changing behaviours
(iv) Implement procedures and record results and
(v) Evaluate progress and revise as needed (Skinner, 1953). On the strength of this, Griffith and Hamza, (2006) posited that, behavioural principles influence the development of both programmed learning and Computer Aided Instruction (CAI).

Skinner's Behaviourist theory has some impact with respect to school evaluation and effective management. It is argued by Hofman, Dijikstra and Hofman (2006), that "Educational systems

have developed towards accountability policies in which schools maintain autonomy for their pedagogical, instructional and organizational policies (internal control). At the same time, they are held accountable for the quality level of their school's education to public authorities (external control)".

The focus of evaluation is to consistently redirect the school system towards the value of quality in the total life of the school. This is with regards to the quality of leadership (management), teachers, curriculum, school facilities and so on. It is the pivotal role of the administrator to ensure feedback so as to reinforce teachers' behaviour. It is opined that in "quality focused schools, the existence of regular performance feedback is never questioned, and viewed as a critical part of the work. Teachers expect to get feedback and see it as the most valuable tool for improving their skills" (Ramiah, 2007). In a research study carried out by Hinkin & Schriesheim (2004) using 243 employees of two separate hospitality organizations, they discovered that "employees who received feedback from their managers, whether positive feedback or negative / corrective feedback, showed improved performance." They also discovered in the study that "omission of commentary on good performance diminished workers' effectiveness and reduced worker satisfaction." Operant conditioning suggests that any behaviour that is often totally ignored will ultimately be extinguished.

Skinner's operant conditioning has found outstanding relevance in various settings. For example, in clinical (for behaviour modification), teaching (for classroom management), instructional development (for programmed instruction) and management (for organizational behaviour management) (Encyclopedia of Business, 2011).

The Theory of Reinforcement and Teacher Evaluation

According to Skinner, the purpose of instruction is to alter behaviour in the desired direction. Hence, the evaluation of instruction is intended to determine whether the behaviour changed in the expected direction (Hannum, 2011). He further argued that, Skinner's ideas about "learning are the basis of criterion- referenced testing, and this derives the test items directly from the stated learning objectives. Evaluation should therefore, assess the student's behaviour before and after instruction to see whether what they learned (learning, according to Skinner equal behaviour change) brought about behavioural change.

In applying Skinner's theory in the classroom, he believed that teachers should supply immediate feed-back to students. That is, not allow students to complete a complete worksheet before giving feedback. The teacher should work with the students on one question at a time, not allowing the students to continually make the same mistakes repeatedly" (WikEd, 2011).On the other hand, he also argued that teachers and school districts determine classroom rules and what are the punishments and reinforcements that go along with breaking or obeying such rules" (WikEd, 2011). According to Wolfgang (2001), negative reinforcement is not the same as punishment. He argued that negative reinforcement is "where a student has something that is unpleasant, taken away from him/her for doing something good (for example, give the student a "no homework pass"). Punishment is "a consequence following a behaviour that decreases the likelihood of the behaviour occurring again" (for example, when a student does something bad, he could be given an extra essay assignment, or a preferred activity is taken away from him). Teachers are often faced with behavioural management in the classroom. As a consequence of this, behaviour management methods advocate that students should be rewarded when they conform to school expectations and punished when they run foul to school expectations. This means positive reinforcers for favourable behaviour and negative reinforcers to discourage inappropriate behaviours.

What is the impact of reinforcement behaviours on teacher's performance? It is argued by Ramiah (2007) that when "teachers are not informed whether they are doing poorly or doing well, uncertainty will surround their performance." According to him, the consequence of this will be negative outcomes such as reduced satisfaction, increase in office politics and lack of commitment". It is generally believed, from the standpoint of Skinner's theory, that the application of reinforcement will shape behaviour. Connecting this with teachers' performance, the position of Hinkin and Schriesheim (2004) is quite appropriate. They considered the link between "subordinates" performance and the supervisor's "non-response behaviour or omission".

They averred that, "employees need relative feedback, but the managers might be unwilling or lack the ability to satisfy these needs. Extended further, they argued that "the absence of response or feedback will possibly reinforce undesired behaviour and affect the feeling of the subordinates and results in confusion and dissatisfaction" (Hinkin and Schriesheim, 2004).

Their position is well captured in the table below:

Subordinate's Behaviour	**Leader's Response Behaviour**		
	Positive Reinforcement	Punishment	Omission (No reaction displayed)
Good Performance	Increases likelihood of future good performance	Decreases likelihood of future good performance	Decreases likelihood of future good performance (OP)
Poor Performance	Increases likelihood of future poor performance	Decreases likelihood of future poor performance	Decreases likelihood of future poor performance (OP)

(Source: Hinkin & Schrisheim, 2005)

Taxonomy of Leader Response Behaviour-Subordinates Performance Effect

We can deduce from the table above (Taxonomy of Leader Response Behaviour – Subordinates performance Effects) the effect of reinforcements. According to them:

1. "Positive reinforcements for a subordinate's good performance will increase the likelihood of future good performance.
2. Positive reinforcement for poor performance will increase the likelihood of future poor performance.
3. Leader's punishment behaviour for subordinates' good performance will decrease the likelihood of future good performance.
4. If punishment is given to poor performance, it will decrease the likelihood of poor performance
5. If no reaction is given for good performance, this would decrease the likelihood of future good performance.
6. They were not certain of the effect of poor performance.

The Theory of Reinforcement and Effective School Management

The role of the administrator (the principal or "manager") can also be considered under Skinner's behaviourist theory. It is common knowledge that students' learning is the basic function of schools. It is on the strength of this that "administrators can reinforce and enhance teaching practices that will contribute to the improvement of students' learning" (Fischer, 2011). This can be effected through the effective supervision of instruction. This can be done as administrators "skillfully analyze performance and appropriate data, thereby providing meaningful feed-back and direction to teachers that can have a profound effect on the learning that occurs in each classroom (Fischer, 2011). In carrying out teacher evaluation, the administrators must be skilled in the following areas: "what to evaluate, how to observe and analyze classroom observation information and other data, and how to translate the results of observations and the summary of the data into meaningful conference feedback that guides and encourages teachers to improve instruction" (Fischer, 2011). The feedback that the teacher receives is a form of reinforcement as this will indicate if the teaching practice contributes to the improvement of the students' learning. By extension, the administrator should be able to ascertain if the teachers are using the different formative and summative diagnostic processes in planning their instruction.

In examining behaviourism and its instructional premises, Dawe (2006) captured vividly, the role of instruction in schools. He argued that "students in a number of schools admit that behaviourist style teaching principles are in operation. They go through instructions from the teacher, who attempts to cover the curriculum content. After a while, the students are expected to write a test on the material presented to them. The level of performance will indicate if the student truly absorbed the material. If he / she get good marks, then that is the reward.

Reinforcement theory can be applied in management setting. This is said to be relevant tool for changing employee's behaviour. This is done by manipulating the consequence (Kio, Ogunyomi & Ojodu, 2011). The implication, according to Fagbohungbe and Longe, (2011) is that, when you know that there is a high level of motivation for you to do a particular thing, there is the tendency that you will be willing to do it. This is strengthened by the reward tied to it, for example, the benefits received by sales agents (commissions). These rewards reinforce them positively to strive towards high sales. "Employees are highly motivated because the quality is reinforced with pay rises, promotions (etc) that employees find desirable. Workers learn various behaviours in a business or company setting. These behaviours can be rewarded or punished. Therefore, operant conditioning can be applied to organizational setting (Encyclopedia of Business, 2011). The school setting can be considered to be an organization, albeit, saddled with educational activities and pursuing learning outcomes.

Criticisms of B. F. Skinner's Theory of Reinforcement

In spite of the roles associated with Skinner's operant conditioning in Education, there have been some marked criticisms. One of the major critics of Skinner's theory is Alfie Kohn. Khon, who is also a prominent educational theorist, argued that, "rewards and extrinsic motivation yields compliance, which is not, as Skinner suggested, a natural behaviour devoid of willful choice. Furthermore, Kohn posited that it trains humans to expect rewards to such a large extent that they fail to find motivation in the absence of a promised reward". He further postulated that the "more often rewards are used, the more humans become used to them and expect them, and the more they are needed" (Kohn, 2004). Although Kohn acknowledged the role of rewards and punishment in Behavioural Psychology, he argued that most of the experiments, studies and practices in this regard, often involved animals other than humans (Classroom Management Theorists and Theories, 2011). Rand and Chomsky (2011) also agreed with Kohn's criticism of Skinner's theory. Rand disagreed, however, with the argument that "memory is not influential in human choice, that humans can simply be conditioned to adapt to particular environmental factors".

On his part, Chomsky argued that Skinner's "empirical evidence is non-transferable to the complexity that exists in human's ability to communicate and respond to a variety of environmental influencers. The position of Hannah (2011) appeared to be more objective. In her critique of Skinner's theory, she argued: "I see legitimacy in the classroom management and learning theories of Skinner. His theories make sense and are familiar to me as a teacher, but I also agree with arguments against his studies' reliance upon laboratory experiments with animals. Yet, I also think that other theorists such as Kohn are quick to reduce Skinner's prescriptions for the classroom to an entirely superficial system of rewards and punishments. Skinner's ideas are more complex than this, beyond rewards and punishment. He stressed that the environment of a classroom and school, both physical and temporal, should be conducive as possible to students' learning. It should not be an environment that necessarily attempts to control that learning with what we popularly called consequences." In summary, Skinner's theory, beyond praise and reward, stresses immediate feedback, scaffolding and ensuring student's success. According to Hannah, these are teacher actions, and are the manipulation of the classroom environment. These can hardly be critized by any educational theorist.

Conclusion

Skinner's theory has varied relevance in school evaluation and effective management. The focus of any school system is learning outcomes. As a result of this, an effective management will desire the inputs from adequate evaluation. The entire process of classroom evaluation, teacher evaluation, curriculum evaluation, leadership / management evaluation, and facilities evaluation, all converge at the application of the right theories geared towards teaching and learning. No doubt, there may have arisen some level of criticisms associated with Skinner's theory, however, we must be quick to add that it has tremendous relevance in the determination of teaching and learning outcomes.

Recommendations

- Adequate feedback should be given to teachers to assist them in carrying out effective self-evaluation.
- Learners should be rewarded so as to effectively improve on learning outcomes
- The administrators should be able to harness the strengths of the teachers for the right management tools to enhance effectiveness.
- Teachers and administrators should be rightly remunerated in order to get the best educational outcomes.
- The entire School System should apply Skinner's theory, as this would lead to consistent feedback and rewards in order to reinforce all segments in the system.

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