

創造思考教學法的理念與實際

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64-88

一、爲什麼需要倡導創造思考教學法

創造思考教學法是隨著時代的需要更見其重要性，人類有生理的、安全的、好奇的及創造的需求，創造思考源自人類的天性與愛好。

(一) 創造思考教學法的效益：

1. 激發個人的潛力，帶來學習的喜悅。
2. 促進腦力的發展，帶來生命的新興趣。
3. 增進自信心、主動力及領導力。
4. 促進新的構想，產生新穎的解答。
5. 增進對學習的熱忱及效率。
6. 促進更有彈性的思考。

創造思考是一種連續不斷，尋找更有效方法的思路歷程。

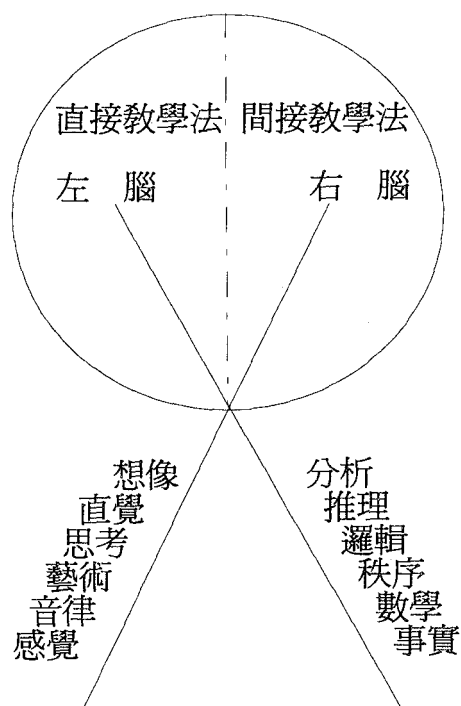
二、人類的本能與潛能

人類的潛能比我們想像的要大的很多，一般人對腦力及創造力使用的比率還是很有限，這是因為人類對大腦的運用方式還不十分了解所致。另外亦受到以下的理由所限制：

- (一) 受傳統習慣的影響
- (二) 恐怕失敗
- (三) 怕被人批評

- (四) 太理想化而不願嘗試
- (五) 不問問題的習慣
- (六) 不願意冒險

人類大腦左右半球的功能如下：



是一般的教育比較注重大腦左半球功能的發展，人類均具有左右腦功能的潛能，我們應發展左右腦配合運作的教學法來激發潛能，以達到更高的學習效果。

在人文科學、企業界或教育界最需要的人才是要具有：

- (一) 創造思考的人。

- (二) 統整綜合的人。
- (三) 宏觀認知的人。
- (四) 創新革新的人。
- (五) 愛心動機的人。

三、創造思考教學法的原則

1. 以學生為中心的教學法。
2. 採取公平合理的教學法。
3. 鼓勵創新的教學法。
4. 促進獨立學習的教學法。
5. 鼓勵解決問題的教學法。
6. 採用間接教學法。
7. 鼓勵從嘗試中學習的教學法。
8. 促進擴展視野的教學法。
9. 給予充分責任與練習的教學法。
10. 注重溝通協商的教學法。
11. 設計有效學習環境的教學法。
12. 培養自動自發的教學法。

四、了解學習動機的來源

學習動機主要來自內在與外在的原因

(一) 內在的原因：

1. 成功的激勵

2. 適當的目標
3. 理想及夢想
4. 決心及信心
5. 自我期待

(二) 外在的原因：

1. 獎勵
2. 鼓勵
3. 比賽
4. 期待
5. 支援

在創造思考的教學過程中最重要者要喚起高度的學習動機，而動機的引發，重在內在自發的動機，因為內在自發的動機，具有高度而永恆的原動力。

五、教學上的關鍵問題

在教學上有三個重要的關鍵問題：

(一) 學生往往因為以下的理由對體育失去興趣：

1. 久等、活動不足。
2. 課程刻板、重覆。
3. 動作太難、危險。
4. 不受尊重、被嘲笑。
5. 常失敗、自覺能力不足。
6. 學習環境不適當。

7. 學習缺乏創意。

根據筆者長年的調查，發現平均有30%的學生對體育失去興趣，這是推展體育嚴重的負面作用，教師應針對著問題尋找對策以求改進。

(二) 學習時間的問題

一般教學中教師使用的時間分配大致如下：

1. 管理時間～15%
2. 等待時間～25%
3. 教導時間～25%
4. 練習時間～25%
5. 其他～10%

我們知道等待是學生對體育失去興趣的重要原因，同時亦是在教學過程中產生問題最多的時段，所以教師應盡量的減少管理及等待的時間以增加練習的時間，來增進學習的興趣及學習的效果。

(三) 教師的教學經驗

總體而言，一般教師對直接教學法比較熟習，而對間接教學法比較陌生，因此，教學往往是老師唱戲，學生看戲，這種傳統教學法很難帶動創造思考的教學法，要發展學生的創造潛力，教師應同時發展直接及間接教學法配合運作的經驗。

六、直接教學法與間接教學法的配合應用

從筆者多年的實驗結果發現，直接、間接教學法的配合運作是

最有效的教學法。

人類的學習需要清楚的目標及方向，但太直接的教學法容易造成刻板的教學法，但太間接的教學法亦往往容易造成鬆懈，漫無目標的教學法。

人類一般心理往往不希望全部被管制，但亦不希望在毫無規劃的狀況中學習，因此給予合適的引導管理並給予適當的思考空間是最理想的學習狀況。

人類的學習需要在不斷調整的狀況下進行，創造思考教學法的介紹最好是逐步進行，教師可以一開始採用70%的直接教學法與30%間接教學法的配合運作，待教師及學生對創造教學法逐漸有較深切的認識與體驗後再逐漸增加間接教學法的比率。

創造思考教學法依賴教師與學生間高度的合作與了解來進行學習，所以教師需要對人性有深刻的了解才能真正配合學習者的需要來發揮創造思考教學法的實際功能。

七、教學重要原則

- (一) 教學目標
- (二) 教學計劃
- (三) 教學說明或示範
- (四) 了解學習者
- (五) 人際關係
- (六) 管理方法
- (七) 學習環境

- (八) 教學法
- (九) 安全措施
- (十) 評量

八、教案計劃

(一) 主題：動作教育(創造思考教學法)

(二) 目標：

1. 創造思考的學習
2. 引起興趣的學習
3. 建立信心的學習
4. 發展基本動作的學習
5. 基本動作力學原理的學習
6. 全體參予的學習
7. 互助合作的學習

(三) 學習內容

1. 動作教育基本結構的學習：
 - a. 對身體各部位動作的了解
 - b. 對空間的了解
 - c. 對時間的了解
 - d. 對聯帶關係的了解
2. 基本力學原理的學習：
 - a. 平衡動作
 - b. 轉體動作

c. 跳躍動作

d. 擺動動作

3. 聯結動作及創造性動作的學習：

a. 個別

b. 小團體

c. 大團體

(四) 教學法：直接教學法及間接教學法的配合使用(1比3)

(五) 時間分配

1. 管理時間：5%

2. 等待時間：4%

3. 說明示範時間：22%

4. 活動練習時間：66%

5. 另外：2%

(六) 場地器材設備

1. 場地：演武廳

2. 器材：音響設備、跳繩、鬆緊帶、乒乓球(每人各一)

(七) 學習環境(狀況)

1. 活潑生動的學習

2. 積極有趣的學習

3. 成功有效的學習

4. 新經驗的學習

5. 各自發展潛能的學習

(八) 評量

1. 對學習者：
 - a. 技術的學習結果評量
 - b. 知識的學習結果評量
 - c. 人際關係的學習結果評量
 - d. 老師對自己的評量

九、教師對創造思考教學法的自我教育

教師都希望學生做必要的改變但對自己的改變往往不積極，比如教師要學生做到：

- (一) 上課時多問問題
- (二) 上課時多參予
- (三) 上課時多思考
- (四) 上課時多想像
- (五) 上課時多用心

如果這些基本的原則教師本身都做不到，又如何去啓發學生，創造思考教學法，教師必須以身作則，以富有創造性的教學法來啓發學生的潛能。

創造思考教學法的理念並不難於了解，但這理念的實際演練及操作，需要多年的自我教育及修練，因為要突破傳統習慣，超越標準答案，隨時求新求變，使用靈活獨特，公平合理，互相尊重，多種解決問題的方法，需要在長期生活中培養或習慣才能移轉到教學中，以發揮真實自然的功能。

教師自我教育的原則：

1. 研究人類的潛能與極限
2. 實施創造性的力行過程：由發現問題，選定最好的解決方法到付諸行動。
3. 應用開發潛在信念法則：由思考、相信到實現。
4. 積極行動、遠離消極
5. 激發聯想、廣泛運用
6. 多問、多聽、多思考。
7. 要有遠大的時間及空間
8. 有思考的時間及空間
9. 將缺點轉為優點
10. 應用由傳統到創新的思考法
11. 啟發自己以啟發別人
12. 學習多種語言、文化、科學、藝術、人文。
13. 多思考別人創思歷程
14. 多探討宇宙之縱橫多面的聯貫性
15. 對自己深層的了解，激發原始本能。
16. 不斷的自我開發，自我改進，以身作則。

創造的想像力，能把夢想變成特定的目標。真正的創造思考教學法是由純真、坦誠及謙和的精神來啟發人類無限而偉大的潛能。

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Movement Education approach

The primary purpose of a movement education programme is to develop each child's potential for versatile and skillful movement in a variety of movement settings.

Movement educators are concerned with skill acquisitions, effective gains, attitude development, social skills, and physical well-being.

(Siedentop, Herkowitz and Rink, 1984) .

The Concept of Movement Education

- .learner-centred programme
- .learner develops at their own level
- .educational design is success-oriented
- .an aesthetic appreciation is developed
- .student is involved fully
- .independent learning is promoted
- .problem solving approach is encouraged.

Movement education places an emphasis on the problem-solving approach, which includes exploration and discovery, based on the individual needs of the student. The programme attempts to develop an intellectual awareness of the body and the pupil experiences the joy of their own movements and style.

In the learning process the teacher inspires the learner. The teacher is

imaginative and creative in the methods used to encourage the learner to develop at their own pace. Motivation for learning comes from learners themselves. They develop at their own rate and demonstrate independence.

The equipment is created to meet the needs of the learner and is used in many different formations and situations. The learning process involves experiencing and practicing and the learner can see the results of how well they are improving.

The learning environment is positive and comfortable and a wide variety of learning formations and situations. The learning process involves experiences are provided at the appropriate level of the learner in which learner can learn for themselves.

Learners are respected as thinking and feeling persons capable of directing themselves. The teacher becomes a facilitator of learning becomes an initiator of the learning so that independent learning can be developed and continued long after their education is completed.

Movement Education Approach and its Application

Lesson framework: Example 1

Movement themes	Movement principles	Equipment
Locomotion	Where it moves Space	Hoop

Movement themes	Movement principles	Equipment
Rotations	How it moves Energy and time	Rope
Balance	What moves Body awareness	Chairs
Spring, flight and landing	How it moves Where it moves	Elastic band
Swing	What moves How it moves Where it moves	Ribbon ball
Combinations	With whom it moves Relationships(Individual, pair)	Combinations

Strategies

- From familiar to unfamiliar movements
- from small to big space
- from simple to complex skills
- from individual to group work
- from individual to group equipment
- interchange of music paces
- interchange of teaching methods
- interchange of movement themes

Lesson framework: Example 2

Themes	Equipment
1.Movement Exploration Body awareness Space Time and energy Relationship	Plates Cards
2.Locomotor skills Running Jumping Hopping Skipping Rotating	Ropes Table Plates Elastic band (2 metros long)
3.Non-locomotor Skills Stretching Pushing Twisting Balancing	Elastic band Chairs
4.Manipulative Skills Throwing Catching Kicking Hitting	Ropes Plastic rings Cardboard Ping pong balls
5.Group Work	Elastic band (30 metros long)
6.Conclusion (Discussion)	

Action drawings

The following are some action drawings based on the Dunedin symbol of the Albatross. These are found to be very effective in leading and motivation children's imagination to move. Teachers are encouraged to create their own to suit their needs.

Themes Approach

The concept of A Theme

'The theme, then, is a particular aspect of a movement chosen by the teachers as the focal round which he can build a series of lessons.

Through a variety of movement experiences given to the class he will gradually emphasize this one element, showing how it is present in many different situations and how it can itself be clarified and developed.'

(Williams, 1987)

Themes approach based on the author's teaching video, *Gymnastic Themes Approach*, 1897, which adopted the central core of gymnastic movement into four major themes. There are:

- Balance
- Rotation
- Spring, flight and landing
- Swing

Each theme is structured clearly through its sequential development from basic to more advanced skills. The themes approach provides a range of starting points for teachers.

The teachers may also apply this idea to rearrange their themes for other activities. For example:

Athletic themes

Theme 1 Running

Theme 2 Jumping

Theme 3 Throwing

Ball skill themes

Theme 1 Locomotor skills

Theme 2 Non-locomotor skills

Theme 3 Manipulative skills

The advantages of keeping to a themes approach are seen in:

- 1.The emphasis put on progression, moving from simple to complex skills
- 2.Forming the foundations for more advanced skills
- 3.Accommodating mixed abilities of children
- 4.The provision of a balanced programme with attention to each of the four themes
- 5.Teaching and learning through sequential development

Interdisciplinary Approach

Physical education shares many objectives with the rest of the curriculum. Learners learn to communicate, calculate, and cooperate. They learn problem-solving, self-management, and competitive skills. They develop study skills and attitudes as well.

It is important that learners learn to share content knowledge, skills and attitudes between subjects to reinforce learning.

Interdisciplinary approach means to expand physical education beyond its subject. Makes application of learning in other subject areas, and helps learners to discover the link and connection.

We need to educate our learners to become more skillful and adaptable in making connections and application to maximize their learning outcomes.

'The aim of education is to promote the development of a well-integrated person.' (James, 1967) .

Through interdisciplinary approach, learners learn to :

- communicate competently, concisely and confidently
- calculate accurately and estimate proficiently
- present information clearly and logically
- think creatively and critically
- take initiative and commitment
- develop a positive approach to challenge and change
- demonstrate self-discipline and self-management

- show good relationships with others
- develop personal fitness and health
- develop a wide range of motor skills
- make links and connections
- develop a wide range of motor skills
- make links and connections
- develop a wider view and perception

An interdisciplinary approach using skipping activities as an example.

Skipping Across the Curriculum

Rationale

1. Promote the link between different aspects of learning to broaden concepts and reinforce learning.
2. Bring a sense of wholeness for learners so that they see the relevance of what they are learning and how all knowledge and skills are inter-related.
3. Provide opportunities for sustained interest by forming connection and relationships between subjects.
4. Stimulate and inspire learners' thinking, understanding attitudes and concepts, so that the learning becomes more interesting, meaningful, practical and useful.
5. Provide learners with the maximum opportunity to participate at their own level and interest.

6. Allow skipping activities to be approached from a variety of perspectives.

Structure of Skipping Across the Curriculum

Chart 7-1

Structure of movement Education	Principles of Movement Education		Subject	Some Examples
Body Awareness	What can you move Moving different body parts Changing the relationship between body parts		Arts	<ul style="list-style-type: none"> · Communicate through symbols, motifs, signs, displays · Express personal feelings, attitudes, emotions, experiences, sensations and ideas · Forms, images and events which use a combination of media such as: performance - the use of various media in time and space
Space	Where can you move? Moving within self space and into general space		health	<ul style="list-style-type: none"> · Physical activity for health · Caring for the body · Building self-esteem
Energy	How do you move Creating force Absorbing force		Language	<ul style="list-style-type: none"> · Action words cover many aspects of movement · Each word will have a different movement, sensation, feeling, quality and expression · Making up appropriate rhymes or poems-first writing in sequences and them moving to the sequence · Choose action words and make up a movement sequence
			Maths	<ul style="list-style-type: none"> · Measurement skills · Quantitative techniques · Constructing of graphs, diagrams and symbols · Recognize patterns and structure · The skills of measuring angles
			Music	<ul style="list-style-type: none"> · Responses in movement-to encourage a response to the elements of music-mood, rhythm, pitch and intensity

Structure of movement Education	Principles of Movement Education		Subject	Some Examples
Time	<p>How can you vary the way you move ?</p> <p>Moving at different speed and with different rhythm</p>		P.E.	<ul style="list-style-type: none"> · Singing games and action songs · Creative activities-exploration of sounds with the body, everyday objects and instruments with movements · Locomotion skills · Non-locomotion skills · Manipulative skills
Relationships	<p>With whom do you move?</p> <ul style="list-style-type: none"> · Individually · In pairs · In a group 		<p>Science</p> <p>Social Studies</p>	<ul style="list-style-type: none"> · Matter Observing · Energy Measuring · Time Classifying · Space Experiencing · To investigate and compare: skipping activities in our own and other countries · To relate the findings to our own activities · To consider what significant differences and similarities emerge from these studies and what can be learned from them

Skipping Across the Curriculum Through Creative Challenges

Linking the Essential Learning Skills to the Essential Learning Areas

