

# **Resource Material based on Critical Pedagogy for Teachers at Secondary Level of Kerala State**

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## PREFACE

This handbook is developed in the workshops conducted at Regional Institute of Education, Mysore on the request of Kerala state. New curriculum, Syllabi was developed by Kerala state, keeping the guidelines of NCF 2005. Several changes brought in syllabi and textbooks demand sufficient changes in the classroom transactions and approaches. A paradigm shift from teacher centric classroom to child centric classroom not only brings reforms in transaction modes but also in the role of the teacher. Emphasis is laid on the construction of knowledge through experiences, critical thinking, relating outside experiences of child to classroom experiences etc. Role learning, teachers dominance take back seat. Knowledge is emerged through experiments, inventions, inquiry, and interactions. Transformation in child is visualized through such system. Questioning the knowledge, organizing learning experiences meaningfully, understanding the problems, looking for solutions require critical thinking. We have to prepare our children in this direction. This transformation is aimed ultimately at the transformation of society. Whole classroom, school environments have to undergo drastic changes. Classrooms should become places for interaction, discussions, and debates. Teacher should provide safe space for these activities. Children should derive at conclusions after identifying issues, analyzing them. This is possible only when children start thinking critically, express their opinions, listen to other views and collect information.

An attempt is made through this handbook to conceptualize critical pedagogy as an integral part of transaction, not as an approach. Issues related to content that have social, economic, political, value relevance can be identified and deliberated in classrooms. In order to make whole transaction through systematic approach, a format of lesson is developed. Few sample lessons are presented. It is aimed to provide an opportunity to utilize these samples in classrooms and get feed back. Details of format, need are discussed in this handbook. Format and lesson plans are developed through number of deliberations done by resource persons, educationists, researchers and practicing teachers. This would help the teachers to plan their activities. This is not a final sample. Format and plans can be contextually modified.

I hope this manual helps in meeting the requirement of teachers at secondary level, if not totally certainly paves ways for approaches in transacting using critical pedagogy. Suggestions are welcome for improvement.

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## **Critical Pedagogy**

Critical Pedagogy has been debated for more than three decades and has not been comfortably accepted in educational system (Linda Keeling Styles–2007). Critical means “examining and judging analytically without bias” and pedagogy may be described as “a deliberate attempt to influence how and what knowledge and identities are produced within and among particular sets of social relations (Giroux and Simon, 1989). There is no universally acceptable definition on approach to critical pedagogy. Critical pedagogies are constantly being reframed and redefined in any education system. Critical pedagogy has its roots in critical theory and two share many common philosophies and approaches. Both are concerned with a view to resisting the imposition of dominant social norms and structures. The concept of critical pedagogy emerged mostly on the work of Paulo Freire “Pedagogy of the oppressed”. He endorses students' ability to think critically about their education situation; this way of thinking allows them to “recognize connections between their individual problems and experiences and the social contexts in which they are embedded”. Realizing one's consciousness (praxis) brings about social transformation. Post modern, anti-racist, post colonial and queer theories substantiate and explain Freire's ideas. They also shift the focus on social class to include issues pertaining to race, gender, sexuality, nationality, ethnicity and age.

Critical pedagogy is an education ideology which opposes education as domination. It views knowledge and learning as constructed by the students and the teacher together. The goal of critical pedagogy is personal and social emancipation and empowerment” (Ryan Westmacon). “Critical pedagogy is primarily an educational response to oppressive power and inequalities existing in educational institutions. A critical person is one who is empowered to seek justice, to seek emancipation” (Burbules and Berk, 1999). “Critical pedagogy aims at contesting wide range of educational practices and philosophies”. It involves a way of thinking about, negotiating and transforming the relationship among classroom teaching, the production of knowledge, the institutional structure of school and social, material relations of community and society.” (Mc Laren 1973).

“Critical pedagogy as “Habit of thought, reading, writing, and speaking which go beneath surface meaning, first impressions, dominant myths, official pronouncements, traditional clichés, received wisdom and mere opinions, to understand the deep meaning, root causes, social context, ideology and personal consequences of any action, event, object, process, organization experience, text, subject matter, policy, mass media or discourse”. (Ira Shor – in Empowering Education). “Critical pedagogy is a teaching approach which attempts to help students question and challenge domination, the beliefs and practices that dominate”. This practice helps students to achieve critical consciousness. “Critical Pedagogy is referred to educational theory, teaching and learning practices that are designed to raise learner’s critical consciousness regarding oppressive social conditions. It focuses on personal liberation through development of critical consciousness”. “Critical pedagogy provides an opportunity to reflect critically on issues in terms of their political, social, economic and moral aspects. It entails the acceptance of multiple views on social issues and a commitment to democratic forms of interaction” (NCF, 2005).

### **Historical Development of Critical Pedagogy**

Analysis of critical pedagogy begins with examination of work of Paulo Freire, became popular and adopted in 1960 in dealing with social and educational issues. It reemerged in 1980s and dominated as critical pedagogy. Philosophy of critical pedagogy revolves around antiauthoritarian, dialogical and interactive approach. Placing social and political critiques of everyday at the center of the curriculum, implementation of range of educational practices and processes, creating better learning environment and ultimately aiming at better world. Freire did not believe in a system of transference of knowledge but the collaborative and collective production of knowledge grounded in the realities of students’ lives and should be liberative and humanizing. Communicative and dialogical relations should be at the heart of educational experiences. Authentic dialogue between students and teachers and an emphasis on problem solving will help the students to develop critical consciousness. Freire believed that there exists no such educational philosophy that could be reduced to a handbook of classroom strategies, instead he proposed to have different approaches to different educational contexts adapted for individual

situation. "One cannot speak of pedagogy but must speak of pedagogies which respond to particular necessities, interests and conditions. (Gaudiano and de Alba, 1994).

Roger Simon (1987) in his 'Pedagogy of Possibility' suggests that 'Pedagogy must be transformative and will require forms of teaching and learning linked to the goal of educating students to take risks, to struggle with ongoing relations of power, to critically appropriate forms of knowledge that exist outside their immediate experience and to envisage versions of a world that is not yet in order to be able to alter the grounds upon which life is lived". Simon goes on to say, "Teachers committed to this pedagogy of possibility should not look for a prescriptive curriculum and methodology, but rather formulate strategy contextually within an integrated moral and epistemological stance. Jannifer Gore (1993) claims to present strands of critical pedagogy which offers concrete suggestions and examples taken from their own pedagogical practice and which help other educators.

### **Need for Critical Pedagogy**

Knowledge is ever expanding, dynamic and requires continuous attention in day to day transformation of society and imbibe them in teaching learning processes. The present day education system is mostly dominated by teachers. Teacher is active authority narrates and children are passive and receptors of information. Frerie calls this as banking system of education i.e. deposition of information by teachers into the minds of children. The content is dealt as if it is static in isolation of the day today experiences of children outside the classrooms. Sometimes content remains far from reality and becomes alien to the children. The process becomes lifeless and slowly loses interest in learning. Lack of scope for getting relevant experience and learning encourages memorization and thus brain remains as a storehouse of information. This banking system of education also suppresses the natural qualities of children like critically thinking, ideologies, analysis situations, problem solving, etc.

NCF 2005 in report identifies the present day system as an inflexible, isolated from experiences of children, that discourages creativity, critical thinking

and insights of children. Teacher remains in center of the process, sidelining children, disciplines, selects content designs, activities (experiences) oppressing the qualities of the children.

In newly emerging society conflicts of different dimensions are more. Life itself is full of conflicts. How to prepare our children to face such society is the need of the hour. Once child comes out of school, tries to adjust himself to situation individually but never as a part of society. A system that prepares child to become part of such changing, challenging society should be the aim of education. Providing scope to face such conflicts, emerge over these conflict situations is important (NCF 2005). Decision making based contextual experiences, analyzing the knowledge in the constructive prospective should be the approach of teaching-learning process. This provides them an opportunity to think independently. Their opinions, suggestions are to be respected, to make proud of their own success should part of new approaches.

New system that should emerge with child in vision as a learner through various experiences inside and outside the classrooms. They should be provided adequate chances to express their views, interact, and solve problems. Such processes will lead to the transformation of oneself and in turn transformation of society. They should be able to link one experience with other, one problem with other, analyse situation and become masters over situations. Since knowledge emerges from inventions and reinventions adequate opportunities should be provided to discover things. The whole process requires sufficient analysis to

- organize learning meaningful experiences that have direct relevance to outside experiences,
- shift from teacher centred pedagogy to child centred pedagogy,
- create an atmosphere where children are free from fear to express, debate, value others' views, joyful learning,
- keeping their cultural, economic background in mind,
- think of abstracts, reflecting over their views individually and in group,
- analyse situations, solve problems indulge in healthy discussions,

- develop mental skills of thinking, reasoning, agreeing/ disagreeing,
- participate wholly in teaching learning process as partner with teacher,
- solve conflicts within, oneself, in the family and ultimately in society,
- question the knowledge critically, check and search for reality.

Here teachers' role becomes very important.

- He has to provide safe space for children to express and involve in healthy interactions,
- Listen to children and allow them to listen to others' views before jumping to conclusions,
- Provide opportunity to construct and consolidate knowledge.

### **Planning a Lesson**

The philosophy of critical pedagogy enables the teachers to prepare children with varieties of qualities that help them to be a critical thinker, to analyse the situation, take suitable decision, etc. There is separate approach for critical pedagogy, it is an integral part of any teaching learning strategy, is a spontaneously generated idea and there is no rigid plan as such. It could be an addition to the existing plan of teachers, but cannot be an alternative to teaching learning process. It is not restricted to any one subject area like social sciences, science, but certain subject areas lend more themselves than others. An issue from the content area where one feels that there could be conflicts, keeping the background, their experiences could be identified. Such of the issues that lead to critical thinking, discussions, debates, active participation, looking for probable solutions, judging could be selected. The whole process should lead to the transformation within children which in future helps to bring in transformation in society. There is a need for planning curriculum involving number of social issues with themes and sub-themes at each stage of learning. This helps the teachers to plan the activities effectively. Providing such experiences here and there may not help in achieving the purpose, but there should be continuous and deliberate attempts to prepare the minds of children in this direction. The whole process can be infused into the transaction mode or could be supplementary to strengthen previous thoughts. A well planned teacher training programme helps them to equip teachers to bring about transformation (NCF 2005).



This handbook provides few sample modules in different subject (content) areas. A format is developed to take care of all related aspects that can be deliberately tried in classrooms.

The format includes

**Topic :** Name of the topic, content area from which an issue has been identified.

**Level :** This not only tells us about the class/ std, but also the varied experiences at that level.

**The issue involved:** Identification of an issue that gives scope of mixed viewpoints (conflicts) and initiate interaction, dialogues, etc. The issue basically has some social/ economical/ political relevance and leads to critical thinking and meaningful construction of knowledge i.e. learning.

**Different viewpoints:** Selection of issues that have multiple viewpoints (conflicts), generating discussions, critical thinking, organizing, etc. These probable critical questions and perspectives that generates thinking in multiple directions are short listed. There could be viewpoints for the issue and some against. Teacher has to visualize the situation and list down questions to provide some direction, to collect information, organize them, analyse the situation, to prepare them to present their views and involve themselves in dialogues, justify, listen to others' views before concluding. There could be any conclusion or may not and may open up for more issues to be tackled.

**List of likely sources of information for finding answers to these questions:**

The issue identified from a lesson or content area, may not get full support from textbook alone, or insufficient information may be available. To obtain suitable and adequate information teacher has to suggest some references that are within the reach of children. These could be additional source books, films, journals, internet sites, encyclopedia, interviews, newspapers, field visits and so on. These could be identified based on the context.

**Role of Teacher :**

Here teacher is unbiased as far as the students' deliberations. Teacher should not give comments, appreciation or negative remarks. Teacher also has to provide children by asking questions leading to further interactions, bring back to the issue if they are carried away and relate the discussion to the topic. Here teacher provides platform for dialogues, provide ample time and space for working – collection of information, presenting, reaching using polite language. Ultimately they should be able to reach to the most probable agreement on issue. This may not happen also. But the main motive behind is to generate the spirit of critical thinking, analyzing situations/ problems, look for sources for solution presently in classroom, later in society where he is going to live.

**Reflections:**

The whole process may be on an hour or beyond. At the end of each class/ stipulated period of time earmarked for issue, one can reflect upon what has gone into, during the whole process. This can be by taking into account what was planned and the outcomes, whether they were upto expectations, etc. A list of shortcomings can be made to enable the teacher to plan lesson with suitable modifications. It is desired to see some influence on behaviour of children like the way they interact, feel free from all fears, become an active participant, engage themselves in one or other form. In the preview of the context an analysis of deliberation can be made. Interdisciplinary approach could be practiced wherever possible. This helps teachers to improve upon in future plannings.

The lesson samples given here are only samples. They are aimed at exploring a new path. To say that they are final and a foolproof model to be followed would go against the very spirit of critical pedagogy. Critical pedagogy suggested by NCF 2005, emerges as a social concern. However, in this manual we have tried to extend the boundaries of critical pedagogy by listing salient features of this approach and applying them to different learning situations. Critical thinking for example, would be required for all meaningful learning. The social dimensions of topics from physics or chemistry may not appear sensible at school level as it would require a wealth of life experiences. However, critical thinking is very much needed for developing a sound understanding of these subjects. This would be true

application of critical pedagogy. When analysed from pedagogic dimension just the social aspects would really limit the possibilities of critical pedagogy. Hence this view. It is assumed that a child develops critical thinking would always be in a position to explore various aspects of an issue. The following abilities are considered as part of critical pedagogy.

- Critical thinking
- Logical reasoning
- Seeing relations
- Justifying with examples/ analogies
- Asking questions
- Relating theory to practice
- Inclusive thinking
- Listening to others
- Seeing differing viewpoints
- Using polite language
- Respecting multiple views

The focus of the lesson plan suggested here is basically to reorient our classroom practices and strengthen them with a sound theoretical base. Critical pedagogy is not an end itself. It is a means to help learners to construct knowledge from their own realities considering various dimensions of an issue.

#### **Essentials of a Lesson :**

Any lesson that is planned should contain an issue that has conflicts. Discussions could be generated for and against the issue. The questions generated through debates and discussion should lead to some kind of conclusions. What goes in the lesson or issue is not that important, but the process of critically analyzing situations and deliberating over the issue is more important. This is aimed at in this manual.

**Topic :**

**Lesson :**

**Level :**

**Learning Points :**

**The issue involved :**

**Differing viewpoints :**

**For**

**Against :**

**Listing questions :**

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

**List of likely sources of information for finding answers to these questions:**

**Generating Discussion :**

- Asking questions
- Allowing free expression without comments/ appreciation
- relating to the topic

**Reflections :**

- Did discussion take place as expected ?
- What is the effect it had on students?
- Does it relate to other subjects?
- How can I link tomorrow's discussion to this discussion?

**Desired Outcome:**

**ENGLISH**  
**Units : 1. Std. X Unit I 'Cherry Tree'**  
**2. Std. IX Poem – 'The Toys'**

<b>Topic</b>	:
<b>Lesson</b>	: The Cherry Tree
<b>Level</b>	: Std. X, Unit I
<b>Topic</b>	: Indiscriminate felling of trees
<b>Learning Points</b>	:

1. Students should feel free to critically examine the issue.
2. Students learn to speak, discuss and debate on the issue.
3. Students practice discourses such as letter, diary, etc.

**The issue involved** :  
 "Whether trees which provide shade need to be cut in order to widen the M.G.Road in Trivandrum City".

**Differing viewpoints** :  
**For**

1. Trees need to be cut for widening road.
2. Old trees in dangerous positions need to be cut.

**Against** :

1. Trees need not be cut for road widening instead other alternatives need to be used.
2. Cutting of trees affects the equilibrium of the nature.

**Listing questions** :  
**Shortlist critical questions and perspectives**

1. Can you justify Smt.Sugathakumari's protest against the felling of trees for road widening in M.G. Road ?
2. Do we need to widen our roads by cutting trees ?
3. Without felling trees, is there any other way to widen or reduce the traffic problem in M.G.Road?
4. Teacher makes a statement : "Smt Sugathakumari is a person who comes out and protests on silly issues" – Agree / Disagree. Why ?

**Any other relevant questions.**

1. Smt. Sugathakumari made a speech in front of Secretariat. Listening to the speech you got some points for and against the felling of trees. Prepare a speech bringing out the for and against arguments to be performed in your school.
2. Your father decides to cut the tree which you have planted in your compound. You felt very sad. Make a diary entry.
3. Students may be asked to find and compile the newspaper reports relating to the issue.

**List of likely sources of information for finding answers to these questions:**

1. Internet pages relating to forest, environment and trees.
2. Newspaper reports
3. Environmental magazines
4. Pictures
5. Expert opinion from parents, elders and neighbours.

**Desired Outcome:**

Students should be asked to go through the text content in a detailed manner and to identify a possible solution for the problem of large scale felling of trees.

In the text Rakesh is seen taking much pain in bringing up a cherry tree. He nurtures it with love and care.

**Topic :**

**Lesson :** The Toys (Poem)

**Level :** Level IX

**Topic :** Parents are cruel but lovable.

**Learning Points :**

1. Students should feel free to critically examine the issue.
2. Students realizing the need of punishment, if needed and also realizing the love of their parents towards them.

**The issue involved :**

“A father punished his child by giving 20 strokes of caning”.

**Differing viewpoints :**

**For**

1. Parents have the right to punish their children.
2. How much they punish is immaterial as they gave birth to the child.
3. Only through punishment parents can correct their children.

**Against :**

1. No parent has got the right to punish the child physically.
2. Parents who punish their children physically do not love them.
3. Parents sometimes beat up their children for no reason out of their frustration.

**Listing questions :**

**Shortlist critical questions and perspectives :**

1. What makes your parents punish you physically ?
2. Have you ever realized that the beating from your parents was unreasonable?
3. You might have seen the street children mercilessly being beaten up by their parents? Why so? What makes them do so? Can anyone justify it?
4. After beating a child and later coming and consoling is good enough as far as parents are concerned. Do you agree to this?

**Any other relevant questions.**

1. Your parent might have punished you for some reason. You felt very sad. Write a letter to your close friend regarding the incident.
2. Find out the words which denotes sorrow from the poem.
3. You may try to write a few lines bringing out the sorrow of a child who was beaten up by his parents.

**List of likely sources of information for finding answers to these questions:**

1. Newspaper reports relating to child abuse
2. Internet
3. A Malayalam film “Appuvinde Veedu Enteyum”
4. Similar collection of literature / poems.

**Desired Outcome:**

Children should realize that genuine parents punish their children, but still love them too. Children could reach to a stage where they could realize the need of punishment by parents for a better upbringing.



## Malayalam

(Author unknown – Song about Onam)

**Topic** : Onappaattu  
**Lesson** :  
**Level** : II class

**Learning Points** :

**The issue involved** :

About the Golden days of 'Maveli Kingship'. All people are happy and honest. No falsity anywhere.

**Differing viewpoints** :

**For**

King is good. So the times are good.

**Against** :

King may be arrogant also. He may be violent even.

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- How can a society be free from evils ?
- Will there be really a flawless society ?
- Are there any things not available during the Mahabali time?
- Will happiness of society depend on availability of things alone ?
- Are all the things available now also? If not why? What is the reason you should like to express for this?
- Is there equality now? If not will equality be achieved now?
- What is not heard during the time of Mahabali?
- Can you tell about today's society in your words?

**List of likely sources of information for finding answers to these questions:**

Textbook of II class, Kerala, Govt. Publication, Kerala.

**Topic** : Nan Mekku Sammaana (Prose-Story)  
(Felicitation I got)

**Lesson** :

**Level** : II Class

**Learning Points** :

**The issue involved** :

Honesty and not telling lies. It is a story about an honest worker. A poor man having an iron axe lost it into river. When the river had asked the worker whether his axe is Golden or Silver. The worker simply replied that only iron one is his axe and he had not accepted golden or silver one from her. Then she appreciated the honesty of the worker and presents golden axe also.

**Differing viewpoints** :

**For**

The worker behaved correctly.

**Against** :

He could have taken all the axes.

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- What will be the reward for honesty ?
- Why the worker told “iron one’ is his tool?
- Why the river questioning the worker as if she does not know about his axe?
- Suppose the worker got tempted to take the first option, what would have happened?
- What will you do if you are in the worker’s position?
- What does the story represent?
- If you are river, what will you do ?
- River gave back the axe and worker accepted only iron axe as his own. Who is honest? River or honest?

**List of likely sources of information for finding answers to these questions:**  
Textbook

## Social Sciences

<b>Topic</b>	: Man and Environment
<b>Lesson</b>	:
<b>Level</b>	: VIII
<b>Learning Points</b>	: Large scale environmental damage – deforestation.
<b>The issue involved</b>	: “Deforestation is highly essential today”.

Teacher shows the picture of barren hill, then distributed paper cutting about “What happened in Attappadi “ – asking the following questions.

What is the subject death in the paper cutting?

“Deforestation is highly essential today”.

**Differing viewpoints** :

**For**

Urbanisation  
Industrialisation  
Increased food production

**Against** :

Increased pollution  
Depletion of ground water  
Imbalance in nature  
Environmental degradation  
Lack of rain  
Soil erosion

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- Is soil erosion a great threat to our environment ?
- Rainfall is being reduced, what can be the reason for it?
- What has made us go for deforestation?
- How can we meet the growing needs of people without it?
- How will the earth be if there are no forest at all?
- How does deforestation affect human being?
- Is it possible to avoid deforestation fully ?
- In what way can we protect forest?

**List of likely sources of information for finding answers to these questions:**

- Film on Environment
- Book on Deforestation and Land degradation
- Year book

**Desired Outcome/ Conclusion**

Deforestation created lot of natural problems. So protect forest and protect nature, destruction of forest leads to the destruction of the country.

**Topic** : Kerala Economy

**Level** : VIII

**The issue involved** :

- Should Government interfere with cottage industries?

**Differing viewpoints** :

**For**

- Many rural people are dependent on cottage industries for their livelihood.
- It keeps the traditional art alive.
- Workers are poor.

**Against**

- Production is slow.
- Lot of labour is involved.
- Poor market
- High cost of production

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- List the problems involved with cottage industries.
- Why are cottage industries disappearing from our society ?
- Why should government intervene?
- What can government do to protect the cottage industries?
- Why do people avoid buying the products of cottage industries?
- Are the workers getting right payment for their efforts? Why ?
- What will happen to our cottage industries, if they are not protected?
- How can we support cottage industries?

**List of likely sources of information for finding answers to these questions:**

- Books on History of industries in India.
- Films on Handicraft centers
- Films on rural India.

**Learning points :**

- Problems faced by cottage industries.
- Role of Government in protecting cottage industries.
- Advantages of cottage industries.

**Topic :**

**Level : VIII**

**The issue involved :**

- Should we encourage Swadeshi goods in the present day society?

**Differing viewpoints :**

**For**

- Employment opportunities
- Value addition to primary products
- Use of local skills
- Continuance of Indian heritage

**Against**

- Loss of spirit of globalisation
- Foreign goods are available at cheaper rates.
- Local market will suffer.

**Listing questions :**

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- Suppose people who buy Swadeshi goods have to pay higher tax, what change you may find in the market? How would it affect the production of Swadeshi goods?
- Suppose imported goods are available at lower rate than Swadeshi goods, which one would you buy? Why? Are you right? Why do you say so?
- How would you regard an Indian in Khadi clothes, Rolex watch moving in a Benz car?

**List of likely sources of information for finding answers to these questions:**

- Content on Globalisation
- Freedom struggle of India

**Learning Points :**

- Present condition of Swadeshi goods
- Advantages of encouraging Swadeshi goods

**Topic** : Man and Environment

**Level** : VIII

**The issue involved** :

- Should we go for increased deforestation?

**Differing viewpoints** :

**For**

- Urbanisation
- Industrialisation
- Increase food production

**Against**

- Increased pollution
- Depletion of ground water
- Imbalance in nature
- Environmental degradation

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- What has made us go for deforestation?
- How can we meet the growing needs of people without deforestation?
- How will the earth be if there are no forests at all?
- How does deforestation affect human beings?
- In what ways can we protect forests?

**List of likely sources of information for finding answers to these questions:**

- Film on Environment
- Book on Deforestation and Land degradation

**Teaching Points :**

- Reasons for increased deforestation
- Effects of deforestation
- Ways of protecting forests

**Topic** : Indian Agriculture

**Level** : IX

**The issue involved** :  
▪ Should we build more dams?

**Differing viewpoints** :  
**For**

- More than one crop a year
- Increased food production
- Reduced dependency on rain
- Bringing waste land under cultivation

**Against**

- Submergence of villages
- Loss of property
- Threat to natural resources

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- How can we irrigate fields without dam water?
- What are the advantages of not constructing dams?
- Survey a reservoir. Was that a waste land prior to reservoir? If the land was used, for which purposes was it used? What happened to them now?
- When should we construct dams?
- Is it possible to avoid construction of dams? How?

**List of likely sources of information for finding answers to these questions:**

- Films from National Geography
- Narmada Bachao Andolan

**Teaching Points :**

- Need for construction of dams
- Advantages and disadvantages of construction of dams



**Topic** : Industrialisation and Social Change

**Level** : VIII

**The issue involved** :

- Should we encourage industrialization ?

**Differing viewpoints** :

**For**

- For employment opportunities
- Modernisation of the society
- Higher production of goods
- Production of quality goods

**Against**

- High density of population
- Growing slums
- Unhygienic atmosphere
- Increased pollution

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- Is industrialization necessary ?
- Can we live without industries?
- Suppose there are no industries at all, what would happen to our life style ?
- Should we limit the growing industries? Why ?
- How can we do it?
- What changes we may find on the earth if there are less industries?

**List of likely sources of information for finding answers to these questions:**

- Film depicting working in industries
- Books on Society and Industries

**Teaching Points :**

- Ill effects of industrialization on society
- Merits of industrialization
- Control of growth of industries

**Topic** : Fundamental Rights

**Level** : X

**The issue involved** :

- Should we continue reservation policy ?

**Differing viewpoints :**

**For**

- Improves standard of living
- People were treated badly in the past.
- All people have not yet got the benefit of the policy.

**Against :**

- It divides people.
- General Category people are dissatisfied.
- Casteism gets strengthened.

**Listing questions :**

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- When did we follow reservation policy ?
- Why we had to follow it ?
- Should reservation be based on caste or economic condition?
- Who should be benefited by reservation?
- Who should not be given reservation ?
- When can we discontinue reservation policy ?

**List of likely sources of information for finding answers to these questions:**

- Books on Reservation Policy, Constitution of India
- Survey of the neighbourhood regarding economic conditions of people
- Interviews on Benefit from reservation and so on.

**Teaching Points :**

- History behind adopting reservation policy.
- Implementation of reservation policy – beneficiaries
- Required changes in reservation policy.

**Topic** : Natural Resources

**Level** : IX (Based on NCERT textbook)

**The issue involved** :

- Lack of scientific utilization of natural resources.
- Do the mining of rivers and cause ecological problems?

**Differing viewpoints** :

**For**

- Soil is an important resource that decides the diversity of life in an area.
- Formation of soil is a long term process.
- We should be aware of the protection of soil.
- We should inculcate an eco-friendly approach in life.
- Unscientific mining of same should be controlled.

**Against**

- Sand is an essential component for the construction work.
- Construction is an industry and a large number of labourers are involved in this job.
- We cannot follow an eco-friendly approach all the walks of life.

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- Can we drop all the construction works in the name of protection of nature?
- Why don't we create and introduce certain strict laws for the protection of natural resources?
- Why do the authorities shutting their eyes towards this hazard?
- Why a group of persons involve in such kind of unscientific activities ?
- What is the impact of the tapping of natural resources ?
- Can we drop all the developmental activities in the name of protection of natural resources or what is the alternate?
- Why do the authorities shutting their eyes towards such kind of unscientific activities?

**List of likely sources of information for finding answers to these questions:**

- Journals related to ecofriendly development models.
- Study reports.
- Documentary films.
- Existing laws and regulations related with utilization of natural resources.

**Topic** : Improvement of Food Resources

**Level** : IX (Based on NCERT Textbook)

**The issue involved** :

- Over utilization of fertilizers and pesticides in different crops lead to health and social problems.

**Differing viewpoints** :

**For**

- Scientific level of utilization of fertilizers and pesticides is essential for producing different crops.
- The over utilization of fertilizers and pesticides leads to diseases.
- Increase in the experience for the production of different crops will minimize the profit of farmers.
- To producing crops with over utilization of fertilizers and pesticides leads to more profit to the manufacturers of the materials.

**Against**

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions**

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>▪ What will be the impact in the society of using over fertilizers and pesticides in different crops?</li><li>▪ What are the rules and regulations that exists in the proper utilization of fertilizers and pesticides? If so, is there any level of agency prevailing in the existing system?</li><li>▪ Who are the profit makers out of these activities?</li></ul> | <ul style="list-style-type: none"><li>▪ Who will be the persons responsible for health and social problems related to the over fertilization and pesticides?</li><li>▪ To develop a healthy and social situation in the society, what are the alternatives that we require?</li></ul> |
|---|---|

**List of likely sources of information for finding answers to these questions:**

- Journals and articles related to different crops.
- Health reports from different agencies
- Documentary films related with usage of pesticides.
- Balance sheet of different multinational companies (producers of pesticides and fertilizers).

**Topic** : The fight against apartheid

**Lesson** :

**Level** : VIII

**Learning Points** :

- The practice of discriminating between human beings.
- Efforts by various individuals to wipe out discriminatory practices.
- Slavery in India

**The issue involved** : Discrimination among human beings.

**Differing viewpoints** :

**For**

- They were fed and clothed by employers.
- Their families were given shelter.
- They were employed as plantation workers (provided a means of livelihood).

**Against** :

- They were ill-treated as slaves.
- They were not free.
- They were discriminated on the basis of the colour of their skin/caste/ class.

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- Is there discrimination in our society, today?
- In what form does it exist?
- What do you feel, about employing people to do menial jobs ? Because they are in need of money?
- Is it right to do so even if they are ready for such work?
- Do we have any laws prohibiting such ill treatment? What are they ?
- If not, how can we stop it?

**List of likely sources of information for finding answers to these questions:**

- Books on human rights
- Websites on labour laws, human rights.

**Topic** : Kerala Culture – The Past

**Lesson** :

**Level** : VIII

**Learning Points** :

- Foreign contacts with Kerala
- Influence of various religions on life and culture of its people.

**The issue involved** : Religious tolerance

**Differing viewpoints** :  
**For**

- Everyone is free to practise their own religion.
- Each religion contributes to the culture, art and society of Kerala.
- People learn to appreciate each other's culture.
- There is unity in diversity.

**Against** :

- There are communal clashes because people of one religion feel their's is superior to others.
- There is conversion from one religion to another by taking advantage of the life and situation of the downtrodden.
- Politicians and political parties misinterpret religious scriptures and misguide people.

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- Should there be so many religions?
- Are we really free to choose the religion we want to follow? If not, why ?
- Why are we influenced by others with respect to our choice and practice ?
- What are the problems caused in the name of religion?
- How are politicians manipulating religious faith for a vote bank ?
- How can we put an end to all this?

**List of likely sources of information for finding answers to these questions:**

- Books, magazines about religious fundamentalism.
- Newspaper clippings on religious forced conversions, terrorism in the name of religion, communal violence caused by political ideologies.

**Topic** : Our Society, Yesterday, Today

**Lesson** :

**Level** : VIII

**Learning Points** :

- Migration from villages to towns and cities (Reasons).
- Impact of migration on villages and cities.

**The issue involved** : Migration to cities

**Differing viewpoints** :

**For**

- Development in villages is very poor, therefore people migrate.
- There is a lot of talent in villages, so people want opportunities in cities to study and get better jobs.
- They have a right to settle where they want to.

**Against** :

- Agriculture in villages is suffering.
- Overcrowded cities.
- Leading to slums in cities.
- Unemployment in cities as the competition is larger.
- Villagers get cheated in the cities.
- Urban development boards are unable to tackle the rising population needs like better health facilities, sanitation, food, housing and education facilities.

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

**List of likely sources of information for finding answers to these questions:**

- Books, magazines, journals on migration in India and its social implication.
- Websites on Slums in India and history of their dwellers.

## Physics

### Environmental Problems

**Topic** : Lighting effects of electricity

**Lesson** :

**Level** : Std. X

**Learning Points** :

- How light is produced in C.F.L. ?
- What are the materials inside ?
- What are its advantage ?

**The issue involved** :

Locally made C.F.L. are getting fused earlier. They have less life. But I.S.I. marked have more life. In many countries they give more importance to the disposal of C.F. lamps.

Does throwing C.F. lamps anywhere cause environmental problems ?

**Differing viewpoints** :

**For**

- C.F. lamps cause environmental problem.
- Glass parts causes injury.
- Gas inside it affects lungs and other organs.
- Paint coated/ substance coated inside is dangerous one.

**Against** :

- It does not affect environment.
- Electricity consumption is less.
- Life is more compared to incandescent lamps.
- Gases used in C.F.L. are not harmful.

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- Which range (in wattage) are they available?
- Is it more useful for long time or short time purpose?

**List of likely sources of information for finding answers to these questions:**

- STD X Textbook
- Internet
- Discussion to KSEB officers.
- Discussion to A.N.E.R.T. officers.

**Desired Outcome:**

Calculate the energy consumption in one month by using 40W incandescent lamps and same intensity C.F.L. in your home or neighbouring homes.



**Topic** : Radioactivity / Nuclear physics

**Lesson** :

**Level** : Std. X

**Topic** :

**Learning Points** :

What is Radioactivity?

Which particles and rays are emitted from radioactive isotopes?

What is radio activity?

**The issue involved** :

Nuclear fuel to Koodamkulam power station transported by road from Trivandrum to Koodamkulam causes environmental problems.

**Differing viewpoints** :

**For**

- Transportation of nuclear fuels by road will affect the citizens.
- Radioactive particles and rays affect the human body.
- These rays causes 'cancer'.

**Against** :

- Media of transporting is not a problem.
- This is the only way to solve energy crisis.
- The rays emitted from radio active isotopes do not affect the human body if there is no direct contact.

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- Using Radio isotopes makes it very dangerous to living organisms. Do you agree with this?
- Is there any particles or rays emitted from radioactive nuclei?
- If rays and particles are emitted from such nuclei, what changes occur to the isotope?
- Write a radioactive decay equation.
- Using radio isotope makes it very dangerous to living organisms. Do you agree with this?
- Do you observe or can you identify any radioactive ores in your neighbourhood?

**List of likely sources of information for finding answers to these questions:**

- Finding answers to the questions
- Journals and articles related to radioactivity and nuclear physics
- Health reports and study reports from “Regional Cancer Centre”.
- Std. X Textbook – Kerala syllabus.
- Write ups from various nuclear agencies.

**Desired Outcome:**

Conduct a seminar on nuclear deal signed by India with International Atomic Energy Agency.

Note: Using articles in Daily newspapers.

**Topic** : Volume of Prism

**Lesson** :

**Level** : IX std.

**Learning Points** : Volume of circular prism

**The issue involved** :

'cm' is used to measure length and liquids are measured in litres. But rain is measured in cm.

**Differing viewpoints** :

**For**

- A quantity can be measured in different view, accordingly the unit will change.
- Unit depends on nature of measurement.

**Against** :

- Being a liquid rain should be measured in litre.
- It is difficult to estimate the quantity if measured in cms.

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- How can we find the volume of a prism?
- There are different prisms of same area, how their volume changes with height ?
- To measure rain water in volume, what factors should be known ?
- If the area is specified, then how can we express the volume?
- Is it possible to measure rain water in terms of heights?
- What is your opinion about measuring rain in cms?
- In 2008, rainfall in Kerala is 300 cm, and the area of Kerala State is 38683 sq. km. What is volume of rainfall in the State in 2008?
- If you get the measure of rain in cm, then can you convert in litres?
- In which context, we can use 'm' or 'cm' to measure volume?
- What is the convenience of cylindrical shape of rain gauge?

**Topic** : Perimeter of Circles

**Lesson** :

**Level** : IX Std.

**Learning Points** : Ratio of perimeter of a circle to the diameter is a constant ( $\pi$ )

**The issue involved** :  
All vehicles having different wheel sizes have same speed limit (35 km/hr) in town is unscientific.

**Differing viewpoints** :  
**For**

- Vehicles of different kind should have different speed limit.
- All the vehicles cannot brought to rest by applying same force.
- Accident chances depend on rate of rotation of wheel.

**Against** :

- Speed limit should be uniform.
- Depends on speed of vehicles
- Chance of accident
- No need of separate road tracks.

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- Different wheels are rolling a ground. They travel different distances on rotation. Why ?
- On what factor does the distance depend?
- How does the distance depend on the diameter of the wheel?
- Can you suggest an activity to prove it?
- A scooter wheel has 35 cm diameter and a motor cycle wheel has 84 cm diameter. If they are running at 36km/hr speed, how many times the scooter wheel and motor cycle wheel rotates in 1 minute?
- Do they need different tracks in road to minimize the accident rate?

**List of likely sources of information for finding answers to these questions:**

**Desired Outcome:**

Students are asked to collect details about road accidents and to classify them.

**Topic** : Our country  
**Level** : X  
**The issue involved** : We are not realizing the importance of village life.

**Differing viewpoints** :  
**For**

- Village is better place to live.
- The culture of India rests in the village.
- People in the village are very innocent.
- Village has unpolluted pure atmosphere.

**Against** :

- Villages are becoming towns.
- All modern humans needs and entertainments are possible only in city life.

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- Is village or city a better place to live ?
- Can the village be retained as a village with all facilities of city ?
- Whether they live in the city or village, people generally are not satisfied. Why ?

**List of likely sources of information for finding answers to these questions:**

- Gandhiji's work on Ramarajya.
- Journals relating to village life and city life.

**Conclusion :**

- The village has to be retained as village with facilities of town.

**Topic** : Excretion

**Level** : VIII

**The issue involved** :

Is dialysis only alternative when kidneys fail to function?

**Differing viewpoints** :

**For**

- To keep person healthy.
- To avoid danger due to poisoning.
- To eliminate excess salts and water.

**Against** :

- It is costly.
- It is not a permanent solution.
- Frequency of dialysis may increase with time.

**Listing questions** :

**Shortlist critical questions and perspectives :**

**Any other relevant questions.**

- What happens if dialysis is not done to person who feels symptoms of kidney malfunctions?
- Is it possible to keep our kidneys healthy ?
- Do you think consumption of excess salts can cause any kidney disorders?
- Can drinking excess of water reduce the changes of damages to kidneys ?
- Unhygienic practices of usage o lavatories can also cause kidney damages.
- Donating kidney to a person in need is the only alternative measure to solve kidney problems.
- Should kidney transplant be governed by laws?

**List of likely sources of information for finding answers to these questions:**

- Textbooks
- Medical science books
- Consulting a doctor for expert opinions
- Newspaper reports
- Interview with patients

**Desired Outcomes:**

Students should be able to visualize the problems associated with kidney. Proper precautionary measures to be taken. Finding out possible remediation, extending helping hand to needy, referring to different resources.

इकाई : हमारा देश

कक्षा : X

समस्या : हम गांवों का महत्व नहीं पहचानते हैं।

विविध दृष्टिकोण :

पक्ष : \* गांवों में रहना अच्छा है।

\* भारत की आत्मा गांवों में है।

\* ग्रामीण जनता अकलंकित है।

\* गांव के जल-स्थल वायु प्रदूषित नहीं।

विपक्ष : \* गांव शीघ्र ही नगर बन रहा है।

\* आधुनिक समाज की सारी सुविधाएं नगरों में उपलब्ध हैं।

प्रश्न

> जीने के लिए उचित स्थान नगर है या गांव ?

> गांवों की सुंदरता नष्ट न करके नगर बनाना उचित है या नहीं ?

> नगर हो या गांव आम जनता संतुष्ट नहीं। क्यों ?

सामग्री

\* गांधीजी का समय

\* प्रेमचंद - गोदान

\* पत्र-पत्रिका, मासिका - जो गांवों और नगरों के बारे में लिखा हो।

निष्कर्ष :

नगर की सुविधाओं को बनाए रखकर गांवों को सुरक्षित रखना चाहिए।

इकाई : पर्यावरण प्रदूषण

कक्षा : IX

समस्या : प्रदूषण का कारण मनुष्य ही है।

विविध दृष्टिकोण :

पक्ष : \* प्रदूषण का कारण मनुष्य ही है।

\* मनुष्य भविष्य की चिंता के बिना काम करते हैं।

\* जल-स्थल-वायु प्रदूषण रोकना है। इसके लिए प्रयत्न करना है।

विपक्ष : \* प्रदूषण मनुष्य के नियंत्रण के परे है।

\* आधुनिक युग में प्रदूषण के बिना जीना मुश्किल है।

प्रश्न :

> कोलाश (Colleague) दिखाए, जिसमें -

- एन्टोसल्फान के दुष्प्रभाव से पीड़ित समाज का चित्र हो।

- जल-स्थल प्रदूषण का चित्र हो।

> इस विपत्ति का कथित्व किसका है ?

> प्रदूषण पूर्ण रूप से मिला सकता है ?

> 'शिक्षित मानव और स्वस्थ प्रकृति'  
इस प्रयोग से आप सहमत हैं ?

सामग्री

प्रदूषण से संबंधित पत्र रपट, पत्रिकाएं  
चित्र आदि।

निष्कर्ष

\* प्रदूषण एक हद तक मनुष्य हल सके।

\* प्रदूषण का अवबोध समाज को देना है।



# APPENDIX

## **I-Phase Workshop**

This was planned for conceptualization of critical pedagogy, identifying the needs and development of lesson format. Resource persons from Regional Institute of Education, Mysore, DIET Mysore and SCERT, Kerala were the active members. The workshop was inaugurated by Prof.G.T.Bhandage, Principal, RIE. A shift from teacher-centered class to child activity centered class, where in children are made to actively participate, critically analyze situation, sharing of their experiences was emphasized. Raising of critical consciousness to tackle day to day problems in society is need of the Hour and children are to be prepared for this. Different experiences of resource persons were shared and their success in transaction in classrooms, using an approach for critical thinking and analyzing situations was visualized. It was felt that critical pedagogy could be part of teaching learning situations of classrooms or could be an add on experience to the content already discussed. Activities can be planned in such way that children and involved in deliberations, discussion, participation in various kinds of activities. Role of teacher was also identified as facilitator, providing space for participation. It was also felt that most of the subjects lend themselves for such approach. Social sciences provide more opportunities than other, nevertheless if planned science, mathematics subjects also

Help in critical pedagogy. Several examples from textbooks were discussed.

Kerala curriculum was reconstituted to link social issues to classroom activities. The syllabi developed for various stages of schools were mainly focused on major identified issues. Syllabus grid containing major issues sub issues, process skills, concepts expected, values and attitudes developed and learning aids used were discussed. The newly developed textbooks on the life of few curriculum and syllabi were analysed.

Planning of a suitable format for lesson was also discussed. A plan was developed which included the issue, questions that are likely to arise, mode of transaction, outcomes and planning for future. A format is enclosed and details are also worked out to justify the inclusion of each component. Teacher's role is most important in such approaches. Few sample lessons which were practiced in classrooms were also presented and were modification were suggested. Few sample lessons were also designed by resource persons and were examined. It was also decided that few more samples be prepared and presented in the II phase workshop. It was also felt that few working teachers in various subject areas be invited to make them aware of critical pedagogic approach planned and also to involve them in writing few lesson samples using the new books prepared by Kerala Government.



## **II Phase Workshop**

A team of resource persons from RIE, DIET, Mysore, SCERT, Kerala and practicing teachers constituted the team for taking stock of lesson prepared and discussions for modifications. The teachers expressed that they have their own plan for practicing the approach of critical pedagogy. The team was appraised for the present day classroom transaction modes and an input on critical pedagogy and its need was given. The format developed in previous workshop was presented and the plan of format was accepted with little modification. They were also given the lesson samples prepared earlier asked to go through. After several deliberations and suggestions few sample lessons were prepared by the teachers. The subject areas included Social Sciences, Physics, Mathematics, Sciences, Hindi, English and Malayalam.

Each lesson was picked from the textbook followed by them or the themes, which were planned in syllabi for classes VIII to X. Since some books were not available, syllabus was used to identify themes and issues. Some of the current issues of Kerala state like deforestation, reforestation, used of CFL bulb were the issues for preparation of lesson format.

After each lesson plan was written, it was presented and was discussed in depth. Suggestions were invited and modifications were incorporated. After the approval of first sample few more samples were developed and discussed. Even though few samples are provided they are not the final plans to be followed in classrooms. They are just samples. Modifications in format, lessons and approaches if needed were also welcome. The practicing teacher has to design the plan based on the situations in that region lesson to be transacted level of children, resources etc. Teachers were also told to help the children to find out different resources, engaging themselves in activities, sharing experiences etc.



## The Need for Critical Pedagogy in Science

***Critical Pedagogy** is an educational ideology which opposes education as domination. It views knowledge and learning as constructed by the student and the teacher together. The goal of Critical Pedagogy is personal and social emancipation and empowerment. The purpose of this link is to give a general overview of science education in general. It will look at the problems faced in science which could be addressed by Critical Pedagogy. This link also looks at the institutional constraints which may contribute to the lack of Critical Pedagogy, and finally looks at some possible approaches to implementing critical pedagogy in the science classroom.*

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The realm of science is forever vast and forever expanding. The sheer magnitude of the scope that science covers is mind-boggling. Science has become an ever present part of our society and is continuing to grow in leaps and bounds. It covers a wide range of topics from biology to physics, and chemistry to medicine. There are so many ideas that revolve around the nature of science that many students today are becoming very interested in the sciences. With an increase in interest comes an increase in student enrollment in science courses.

In science courses, the amount of material that is covered is quite staggering. For most students it can be quite a handful. An issue that should be addressed in science and science teaching is the lack of critical pedagogy within the science courses.

Critical Pedagogy has become a lost art in the science classroom. The problem in the science classroom lies in the understanding of the material. Because the amount of material to cover in a science class is quite substantial, many teachers have been blinded by the curriculum. They are neglecting to search for understanding by the students, and instead, are simply looking at how well a student can memorize and regurgitate a list of facts or theories for a test.

From my experience as a student and as a teacher, I have noticed that this has become a common occurrence in the science classroom. Teacher's are overlooking the understanding of their students for how well they do on tests. These tests do not necessarily reflect what the students actually know and understand.

The lack of critical pedagogy in the sciences is one problem that we should work to alleviate. Student understanding should be just as important as making sure all the material gets covered. The two can work together, simply by using a critical pedagogy approach to the science classroom.

One way to analyze what is happening in science classrooms is to look at them from a critical viewpoint. The idea of critical pedagogy is to educate students in a way that they will best learn the material. This does not mean adjusting the curriculum to fit each student, but implementing flexible teaching practices which influence each student in their own way. For one thing, on the larger scale in science, we tend to look at it from a dominant culture point of view. In general, we look at it from the eyes of the white males who have contributed to science.

In some respects, this limits the impact of science to those of dominant status in the community. In most cases this just happens to be the white male. In order to rectify the situation and expand the sciences to impact everyone, you have to consider each student's background.

Another problem that we encounter in science is the domination of teacher-talk. For the most part, a science class revolves around the discussion of the teacher. The students are left to find interest in a subject being described in a way that may not be very exciting. The domination of teacher-talk in the science classroom does not allow students to feel a sense of empowerment on their education. When students start to contribute to the learning of subject material, then they will feel empowered.

A third way that perhaps could be changed is the impact of democracy in the classroom. Because of time constraints and curricular demands, most teachers look to ignore the idea of democracy in the classroom. I think that teachers are afraid to lose control of their classrooms. It is my opinion that they feel like they get students to do assignments and homework because they have control and make the majority of the decisions in the classroom. With proper education about critical pedagogy, a teacher can ensure a democratic classroom where they will not lose control and allow students the freedom to thrive.

One last problem that could be addressed in the science classroom is the role of dialogue. It has come to my attention that when facts and theories are taught in science, they are taken at face value. There is no discussion or questioning of facts and theories because the students have been trained not to do so. If teachers can implement a way in which a healthy dialogue is included in the classroom, then the students will foster a greater knowledge and understanding towards the subject material.

In large part the participation, or lack of, in the science classroom is directly related to the lack of critical pedagogy practiced in the classroom. These are only some of the problems that are faced in a science classroom. There are many more that can be discussed, but these are just some that scratch the surface and will hopefully open some eyes. There are, however, some institutional constraints that may suggest a reason for the lack of critical pedagogy being used in the science classroom. In some cases, perhaps it is Ministry policies or school division initiatives that are prohibiting the use of critical pedagogy in the science classroom. This could be of issue in racially hostile areas, for instance. Some constraints could come from parents who do not see the validity in having students earn some empowerment over their education, or maybe some parents are sensitive to their kids learning about different view points other than that of the cultural majority. No doubt, these are definite possibilities. Yet it is my belief, and perhaps it is shared by others, that curriculum guidelines play the most instrumental role in the lack of critical pedagogy in the science classrooms.

Most teachers probably fear that there is too much material and too little time in order to try this type of teaching. They want the students to know the material in order to pass the exams. There is no doubt that teachers are concerned and dedicated to students understanding the material, but I don't think this is being communicated enough.

There is a way to teach the curriculum in the designated time period and look for student understanding. If you can incorporate critical pedagogy into the science classroom, it will allow for an overall better understanding of the material. By allowing yourself to do so, you are promoting a better environment for your students. **Critical pedagogy is an excellent tool for science teachers to not only open the door and allow students to learn the material, but to understand the material as well.** That is what is so important about critical pedagogy, in that it promotes more understanding about the subject area.

Students who are fronted with a critical approach to teaching are most likely to shed their resistance to teaching and will want to participate more in class. As a teacher of science, we should not only understand our material, but our students as well. If we can promote critical pedagogy in our science classrooms, the students will appreciate it, but more importantly, they will thrive in it.

#### Practical Suggestions for the classroom

##### **Integrating Critical Pedagogy into the Science Classroom**

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One way to involve students in their education is to give them **empowerment over their education.**

A suitable suggestion may be **to create a democratic classroom.**

As a teacher, you do not have to allow the students to run all of the classes, but you are simply **including them in some of the decision-making.** For example, ask the class which units they would like to do first, second, and so on. This way they feel like they are contributing to their education. By having a democratic classroom, you are **opening up to student suggestions and are listening to them.** There should be very little power exerted in a classroom. If the **class can make decisions together,** then they will feel more involved in their schooling and will take it more seriously.

Another example of critical pedagogy is teaching using the **method of problem-posing.**

A problem-posing teacher allows **students to look at subject material as it would apply to their everyday life.** This way, students do not feel like they are being forced to learn material in a way that is most common to the dominant sector of the society. This could mean allowing a student to research genetic diseases as it applies to his/her family of culture.



It is just simple, easy ways to give the students a feeling of empowerment and interest in their education. This type of teaching can also **contribute to social transformation**. By being open to all sectors of society, you are **opening students to being more accepting of different views and cultures, races and sexes**. It is hard to see how this would hurt society in any way!

Another way to promote critical pedagogy in your science class is **to allow for open dialogue with your students**. It is awful for students when a teacher dominates the class with teacher-talk. It is less interesting for the students and in turn they lose interest. With a classroom that promotes open dialogue, you are allowing for **students to relay their opinions about certain aspects of the science**. As well, the **students are being pushed to question what they are learning**. Not always do the students have to take what they are being taught at face value, **they should be encouraged to question theories and facts**.

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# Critical pedagogy

From Wikipedia, the free encyclopedia

**Critical pedagogy** is a teaching approach which attempts to help students question and challenge domination, and the beliefs and practices that dominate. In other words, it is a theory and practice of helping students achieve critical consciousness. Critical pedagogue Ira Shor defines critical pedagogy as

Habits of thought, reading, writing, and speaking which go beneath surface meaning, first impressions, dominant myths, official pronouncements, traditional clichés, received wisdom, and mere opinions, to understand the deep meaning, root causes, social context, ideology, and personal consequences of any action, event, object, process, organization, experience, text, subject matter, policy, mass media, or discourse. (*Empowering Education*, 129)

In this tradition the teacher works to lead students to question ideologies and practices that the students themselves consider oppressive (including those at school), and encourage liberatory collective and individual responses to the actual conditions of their own lives.

The student often begins as a member of the group or process (including religion, national identity, cultural norms, or expected roles) he or she is critically studying. After the student reaches the point of revelation where he or she begins to view present society as deeply problematic, the next behavior encouraged is sharing this knowledge, paired with an attempt to change the oppressive nature of the society.

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## Topics Introduced

To help encourage students to change their view from accepting the social norms (viewed by critics as being gullible) into being independently critical (viewed by mainstream society as being cynical) the instructors often introduce challenges to heroic icons and self-edifying history using contradictory reports or external points of view of the same subjects

## Generalized Examples

To encourage students to become critical the instructor might use these tasks to challenge the generally accepted paradigm of the student's society:

- Prompt the student to investigate a war that his or her society has waged and considered just and critically evaluate if it meets the criteria of a just war
- Encourage students to explore issues of power in their own families.
- To lead students to examine the underlying messages of popular culture and mass media.
- Require the evaluation of existing controversies in contemporary society, such as the relative merits of U.S. government spending on atomic weapons versus international health programs.
- Ask whether the metaphoric emperor is, in fact, clothed.

Real-world examples of concepts often introduced to generate critical thinking:

- A challenge to the reverential mythology around Christopher Columbus and leading students to investigate primary sources by and about the historical figure. One might possibly suggest sources such as the Black Legend, or other sources that cast more disconcerting views on the legacy of his efforts.

## Background, Developing a Call for Action

Critical pedagogy was heavily influenced by the works of Paulo Freire, arguably the most celebrated critical educator. According to his writings, Freire heavily endorses students' ability to think critically about their education situation; this way of thinking allows them to "recognize connections between their individual problems and experiences and the social contexts in which they are embedded." [1] Realizing one's consciousness ("conscientization") is a needed first step of "praxis,"

which is defined as the power and know-how to take action against oppression while stressing the importance of liberating education. "Praxis involves engaging in a cycle of theory, application, evaluation, reflection, and then back to theory. Social transformation is the product of praxis at the collective level" [2]

Postmodern, anti-racist, feminist, postcolonial, and queer theories all play a role in further explaining Freire's ideas of critical pedagogy, shifting its main focus on social class to include issues pertaining to race, gender, sexuality, nationality, ethnicity, and age. Many contemporary critical pedagogues have embraced postmodern, anti-essentialist perspectives of the individual, of language, and of power, "while at the same time retaining the Freirean emphasis on critique, disrupting oppressive regimes of power/knowledge, and social change." [3] Contemporary critical educators, such as bell hooks appropriated by Peter McLaren, discuss in their criticisms the influence of many varied concerns, institutions, and social structures, "including globalization, the mass media, and race relations," while citing reasons for resisting the possibilities to change [4]

## Examples

### History

During South African apartheid, legal racialization implemented by the regime drove members of the radical leftist Teachers' League of South Africa to employ critical pedagogy with a focus on nonracism in Cape Town schools and prisons. Teachers collaborated loosely to subvert the racist curriculum and encourage critical examination of political and social circumstances in terms of humanist and democratic ideologies. The efforts of such teachers are credited with having bolstered student resistance and activism. [1]

### Literature

Famous authors of critical pedagogy texts not only include Paulo Freire, as mentioned above, but also Rich Gibson, Michael Apple, Henry Giroux, Peter McLaren, Joe L. Kincheloe, Howard Zinn, and others. Famous educationalists including Jonathan Kozol and Parker Palmer are sometimes included in this category. Other critical pedagogues more famous for their anti-schooling, unschooling, or deschooling perspectives include Ivan Illich, John Holt, Ira Shor, John Taylor Gatto, and Matt Hern. Much of the work draws on feminism, marxism, Lukacs, Wilhelm Reich, post-colonialism, and the discourse theories of Edward Said, Antonio Gramsci, and Michel Foucault. *Radical Teacher* is a magazine dedicated to critical pedagogy and issues of interest to critical educators.

The Rouge Forum is an online organization led by people involved with critical pedagogy.

### Famous quotes

*Do not follow a life of evil; do not live heedlessly; do not have false views; do not value worldly things. In this way one can get rid of suffering.*

— Buddha, *Dhammapada*, Loka Vagga, verse 167

*For what is a man profited, if he shall gain the whole world, and lose his own soul?*

— Jesus, *Bible*, Gospel of Matthew chapter 16, verse 26

*I have lived on the lip of insanity, wanting to know reasons, knocking on a door. It opens. I've been knocking from inside!*

— Jelaluddin Rumi, trans. Coleman Barks

### Movies

In the movie *The Matrix*, the setting is an artificial construction of oppression that instills complacency in its captives through a form of virtual reality, much like the World Wide Web you are currently immersed in. The movie's initial conflict sees the protagonist Neo coming to grips with this truth by suspending belief of the reality he has accepted as unquestionable.

In John Carpenter's "They Live" special sunglasses help the protagonist see the hidden messages that lull the population to sleep and seduce them to obedience. These special sunglasses are a visual metaphor for critical consciousness. But this sort of consciousness is disturbing, and the protagonist has to fight to get someone else to put the glasses on.

In the biographical film *Stand and Deliver* Jaime Escalante challenges urban students to excel at math.

*Dead Poets Society*, a Peter Weir film, is set in a 1950's American prep school. Teacher John Keating encourages students to think freely, challenge social norms and seize the day.

In the movie "Accepted", when faced with cultural and parental pressures to attend college, a group of non-admitted recent high school graduates creates a fictitious college. Ostensibly a teen comedy, Accepted actually exemplifies Freire's notion of critical pedagogy by showcasing the learning that takes place when students are confronted with the question "What do you want to learn?" while they are exhorted by an iconoclast

academic to question various societal assumptions

## Music

*When I think back on all the crap I learned in  
wonder I can think at all.*

— Paul Simon, *Kodachrome*

*We don't need no education, We don't need no thought-control. No  
dark sarcasm in the classroom - Teacher, leave those kids alone!  
All in all, you're just another brick in the wall.*

— Pink Floyd, *Another Brick in the Wall part 2*

Interestingly though, all the surviving pupils who took part in the Pink Floyd recording collectively agree they would not now support as radical a position as the sentiments expressed by the composers in this song. [5]

*The teacher stands in front of the class, but the lesson plan he can't recall. The student's eyes don't perceive the lies bouncing off every fucking wall. His composure is well kept, I guess he fears playing the fool. The complacent students sit and listen to some of that bullshit that he learned in school.*

— Zack de la Rocha, Rage Against the Machine, *Take the Power Back*

These are a few examples of musical artists who have explored the world of critical pedagogy. Artists as diverse as Bob Dylan, Joan Baez, Public Enemy, System of a Down, Propagandhi, The Beatles, dead prez, the Coup and Eminem have been viewed as raising critical consciousness and challenging authority through some of their works.

## Other media

Critical pedagogy is used throughout Grant Morrison's comic book *The Invisibles*. It is a major theme and plot device throughout the series, particularly in the first few issues and the final series.

Also, the book intended for adolescents, "The Giver" by Lois Lowry, depicts an apparently utopian society that is gradually revealed as dystopic. Jonas, the story's protagonist, becomes the "Receiver of Memory" and undergoes a process that is comparable to the development of critical consciousness. Despite the criticisms of various conservative groups who cite that the ideas in the book are inappropriate for children, the book is still included on the middle school reading lists of many school districts.

## Critiques of Critical Pedagogy

This approach has its critics. They attack the methodology, the goal, and appearances. Below are some contrary views.

- Teachers that use this method will often bias the class towards an anti-status quo position instead of allowing them to decide if they agree or disagree with the situation at hand.
- This approach to understanding the nature of society is often presented in a very intellectual fashion. When an individual attains the interest to find out the validity of the statements they inherently must consider themselves separate from the rest of society. Critics will describe such a self-image as being elitist in a way which excludes the bulk of society thus preventing progress.
- The goal exceeds the desire to instill creativity and exploration by encouraging detrimental disdain for tradition, hierarchy (such as parental control over children), and self-isolation.
- Such a high degree of distrust in generally accepted truths will create or perpetuate conspiracy theories.
- Critical pedagogists selectively pick icons to interrogate and subvert: for example, Thomas Jefferson but not Martin Luther King.
- Many people involved in critical pedagogy have never been involved in serious struggles and have used the field to build themselves and a small publishing cabal rather than a social movement. Paulo Friere, for example, can be criticized for being for revolution wherever he was not, and for reform wherever he was.
- Critical pedagogy is, in many instances, a movement in opposition to revolutionary or marxist movements as easily seen in its roots in Catholic base communities of Latin America, created to stave off the potential of class war. Much of critical pedagogy focuses on culture, language, and abstractions about domination rather than criticizing the centrality of class, alienation, and exploitation. *are where...  
my mind,  
no 232*
- Rather than "liberating" student thought, teachers replace a cultural bias with their own bias.

## See also

- Inclusive classroom
- Conscientization
- Queer Pedagogy
- Student voice
- Critical thinking
- Conscientization
- Critical consciousness
- Critical pedagogy

- Popular education
- Teaching for social justice
- Adult literacy
- Adult education
- Praxis
- Praxis intervention

## External links

- Radical Teacher magazine
- The Rouge Forum
- Radical Teaching, a critical pedagogy site
- Pedagogy: Critical Approaches to Teaching Literature, Language, Composition, Culture
- Liberatory Education
- Many relevant links
- "What is Critical Literacy?" by Ira Shor
- *For Your Own Good* by Alice Miller

### Issues in Freirian Pedagogy

[hide]

Anti-oppressive education • Banking • Conscientization • Critical consciousness • Critical pedagogy • *Pedagogy of the Oppressed* • Popular education • Praxis • Teaching for social justice • Youth empowerment

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