

**CIHM
Microfiche
Series
(Monographs)**

**ICMH
Collection de
microfiches
(monographies)**



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques

© 1997

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming are checked below.

- ☐ Coloured covers / Couverture de couleur
- ☐ Covers damaged / Couverture endommagée
- ☐ Covers restored and/or laminated / Couverture restaurée et/ou pelliculée
- ☐ Cover title missing / Le titre de couverture manque
- ☐ Coloured maps / Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations / Planches et/ou illustrations en couleur
- ☐ Bound with other material / Relié avec d'autres documents
- ☐ Only edition available / Seule édition disponible
- ☐ Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.
- ☐ Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from filming / Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- ☐ Additional comments / Commentaires supplémentaires:

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- ☒ Coloured pages / Pages de couleur
- ☐ Pages damaged / Pages endommagées
- ☐ Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- ☒ Pages discoloured, stained or foxed / Pages décolorées, tachetées ou piquées
- ☐ Pages detached / Pages détachées
- ☒ Showthrough / Transparence
- ☐ Quality of print varies / Qualité inégale de l'impression
- ☐ Includes supplementary material / Comprend du matériel supplémentaire
- ☐ Pages wholly or partially obscured by errata slips, tissues, etc., have been refilmed to ensure the best possible image / Les pages totalement ou partiellement obscurcies par un feuillet d'errata, une pelure, etc., ont été filmées à nouveau de façon à obtenir la meilleure image possible.
- ☐ Opposing pages with varying colouration or discolourations are filmed twice to ensure the best possible image / Les pages s'opposant ayant des colorations variables ou des décolorations sont filmées deux fois afin d'obtenir la meilleure image possible.

This item is filmed at the reduction ratio checked below /
Ce document est filmé au taux de réduction indiqué ci-dessous.

10x	12x	14x	16x	18x	20x	22x	24x	26x	28x	30x	32x
					✓						

The copy filmed here has been reproduced thanks to the generosity of:

Vancouver City Archives

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol ➡ (meaning "CONTINUED"), or the symbol ▼ (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:

1	2	3
---	---	---

1	2
4	5

L'exemplaire filmé fut reproduit grâce à la
générosité de:

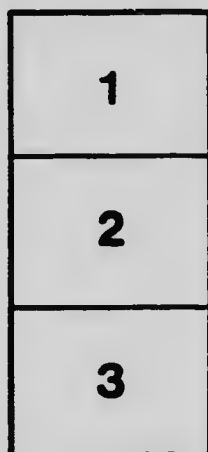
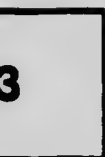
Vancouver City Archives

Les images suivantes ont été reproduites avec le
plus grand soin, compte tenu de la condition et
de la netteté de l'exemplaire filmé, et en
conformité avec les conditions du contrat de
filmage.

Les exemplaires originaux dont la couverture en
papier est imprimée sont filmés en commençant
par le premier plat et en terminant soit par le
dernière page qui comporte une empreinte
d'impression ou d'illustration, soit par le second
plat, selon le cas. Tous les autres exemplaires
originaux sont filmés en commençant par la
première page qui comporte une empreinte
d'impression ou d'illustration et en terminant par
le dernière page qui comporte une telle
empreinte.

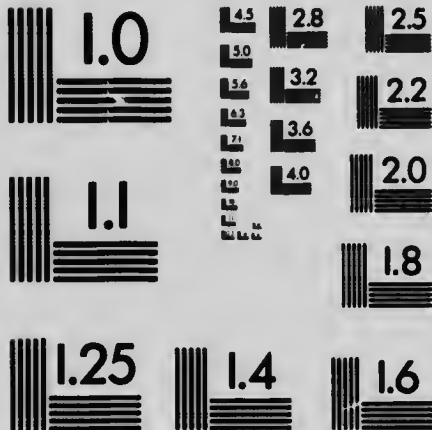
Un des symboles suivants apparaîtra sur la
dernière image de chaque microfiche, selon le
cas: le symbole $\rightarrow$ signifie "A SUIVRE", le
symbole ∇ signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être
filmés à des taux de réduction différents.
Lorsque le document est trop grand pour être
reproduit en un seul cliché, il est filmé à partir
de l'angle supérieur gauche, de gauche à droite,
et de haut en bas, en prenant le nombre
d'images nécessaire. Les diagrammes suivants
illustrent la méthode.



MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



APPLIED IMAGE Inc

1653 East Main Street
Rochester, New York 14609 USA
(716) 482 - 0300 - Phone
(716) 288 - 5989 - Fax

...To Be Held in...
SOUTH
PARK
SCHOOL
Victoria, B C



APRIL 1, 2 and 3
1902.

• Prov
Institu

1902-7

Provincial Teachers'
Institute Programme

INSTITUTE OFFICERS.

President.. . . .	Alexander Robinson, B.A., Victoria
First Vice-President	John Shaw, Esq., Nanaimo
Second Vice-President	F. M. Cowperthwaite, B.A., Vancouver
Third Vice-President	J. D. Buchanan, Esq., Vancouver
Treasurer.. . . .	Paul Murray, Esq., Maple Ridge
Secretary.....	J. D. Gillis, Esq., Victoria

EXECUTIVE COMMITTEE.

Miss E. G. Lawson	Victoria
Miss R. Watson, M.A... ..	Victoria
R. H. Cairns, Esq... ..	Chilliwack
A. Gilchrist, Esq.	Vancouver
W. H. M. May, Esq.	Grand Forks

General Sessions.

TUESDAY, APRIL 1st, 1902.

10:00 A. M.

President's Opening Address.

Enrollment of Members.

General Business.

Election of Officers.

2:00 P.M.

Vocal Solo. Arthur Salvini, Esq.

"Hand and Eye Training" H. Dunneil, Esq.

Discussion opened by W. C. Coatham, Esq.

"A Jubilee Junkeling" Miss Agnes Deans Cameron

"Geometrical Drawing" D. Blair, Esq.

8:00 P.M.

Reception to Visiting Teachers by the Victoria City Staff.

Section Work.

WEDNESDAY, APRIL 2nd.

10:00 A. M.

JUNIOR GRADE SECTION. (SPRING RIDGE SCHOOL.)

Chairman, F. M. Cowperthwaite, B.A.

"The Application of Kindergarten Methods to Public School Work" . . . Miss M. H. Winter

Discussion opened by Mr. T. E. Knapp.

"McLellan and Ames' Primary Arithmetic" . . . Maurice Shaver, Esq.

Discussion opened by F. M. Cowperthwaite, B.A.

INTERMEDIATE GRADE SECTION. (SOUTH PARK SCHOOL.)

Chairman, J. D. Buchanan, Esq.

Oral Geography—"Winds and Rainfall" . . . D. B. Johnson, B.A.

Discussion opened by T. Leith, Esq.

"Commerce and Peoples of the British Empire" . . . Miss M. Lawson.

Discussion opened by J. T. Pollock, Esq.

"Composition and Reading" . . . G. H. Knowlton, B.A.

Discussion opened by Mrs. Taylor.

SENIOR GRADE SECTION. (SOUTH PARK SCHOOL.)

Chairman, John Shaw, Esq.

"Literature" . . . Wm. Burns, B.A.

Discussion opened by Miss Agnes Deans Cameron.

"History" . . . T. Pattison, M.A.

Discussion opened by G. H. Tom, Esq.

HIGH SCHOOL SECTION. (SOUTH PARK SCHOOL.)

Chairman, W. Hunter, B.A.

"Latin Prose Composition" E. B. Paul, M.A.

Discussion opened by J. K. Henry, B.A.

"English Subjects in the High School" Richard J. Clark, M.A.

Discussion opened by Miss R. Watson, M.A.

General Sessions.

WEDNESDAY, APRIL 2nd.

2:00 P.M.

Piano Solo J. G. Burnett, Esq.

"Freehand Drawing" D. Blair, Esq.

"Nature Study"

(a) "Plants" Wm. Burns, B.A.

(b) "Common Minerals" Miss R. Watson, M.A.

Discussion opened by L. Tait, Esq.

Reading J. H. B. Richeby, Esq.

His Honour the Lieutenant-Governor has very kindly consented to visit the Institute at 4:30 o'clock on this afternoon and deliver a short address to the assembled teachers.

8:00 P.M.

Visit to Provincial Museum, Agricultural Department and Legislative Assembly.

Section Work.

THURSDAY, APRIL 3rd.

10:00 A. M.

JUNIOR GRADE SECTION. (KINGSTON STREET SCHOOL.)

Language and Reading Lesson Miss E. G. Lawson
Discussion opened by Miss N. Macken.
"School-room Decoration" Miss M. C. Macfarlane
Discussion opened by Miss M. I. Fraser.

INTERMEDIATE GRADE SECTION. (SOUTH PARK SCHOOL.)

"Oral History" Miss C. P. Grenfell, B.A.
Discussion opened by R. J. Hall, Esq.
"Frontenac" A. M. Harper, B.A.
Discussion opened by J. K. Green, Esq.
"McLellan and Ames' Arithmetic" H. B. King, Esq.
Discussion opened by Miss A. Russell.

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

Provincial Teachers' Institute

A reduced rate of fares has been granted by the C. P. R. and C. P. N. Companies to teachers who propose to attend the Teachers' Institute, to be held in Victoria.

C. P. R. Co. (which includes the C. P. N.)—*twenty-five (25) delegates are in attendance*, a round trip on "certificate plan," that is, teachers pay full fare one way over the C. P. Ry. (or C.P. N.) and receive a certificate from the agent at time of purchase. The certificate, when countersigned by the Secretary of the Institute, will entitle the holder to return to original starting point at one-third fare. *Provisionally (100) delegates are in attendance*, a single rate on "certificate plan," that is, teachers pay full fare one way over the C. P. Ry. (or C.P. N.) and receive a printed receipt, which, when properly signed by the Secretary of the Institute, will be good for return fare without charge.

E. & N. R. Co.—A single rate of fare for teachers attending the Teachers' Institute, that is, teachers pay full fare going and take return fare free. The ticket is to be endorsed as follows, and signed by the Secretary of the Institute: "I hereby certify that the teacher whose name is written on the back of this ticket is in attendance at the Teachers' Institute Meeting, 1906."

Pursers and Agents will issue free tickets for these receipts.

Secretary

HOTELS

Vernon	}	\$
Imperial		
Dominion	}	\$
Balmoral		
Victoria Cafe		

PRIVATE BOARDING

Miss Devereux	
Mrs. Barrett	
Mrs. More	
Pleasanton	Co.
Mrs. McKay	
Mrs. McDonnell	
General price for private board \$1.00 a day.	

Teachers' Institute

VICTORIA, March 4th, 1902.

...n granted by the following Transportation
...to attend the meeting of the Provincial
...ictoria on the 1st, 2nd and 3rd April next —
...e C.P.N. Co.)—*Provided that not less than*
...nce, a rate of a fare and a third for the
...is, teachers at the starting point pay full
...C.P.N.) and take receipt on standard certifi-
...ase. This certificate, when properly certified
...ill entitle the holder to a return ticket to the
...are. *Provided that not less than one hundred*
...ngle rate of fare for the round trip on the
...pay full fare at starting point and ask for
...y signed by the Presiding Officer of the
...e without further charge, within time limit.
...are for the round trip, on "certificate plan,"
...and take a receipt for same, which receipt
...ed by the Secretary of the Institute: "This
...ame is on the face of this receipt has been
...stitute Meetings."
...ee tickets for return journey in exchange

J. D. GILLIS.

Secretary Provincial Teachers' Institute.

OTELS.

... } \$2.00 per day.

... } \$1.00 to \$1.50 according to room.

BOARDING HOUSES.

.....47 Vancouver St.
.....Discovery St.
.....1 Park St.
.....Cor. Bird Cage Walk and Superior St.
.....42 Rae St.
.....43 Bird Cake Walk.
a day.

1. The first part of the paper is devoted to a general discussion of the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system has a solution for arbitrary values of the parameters α and β if and only if the condition $\alpha + \beta = 1$ is satisfied. In this case the solution is unique and is given by the formula

$$x = \frac{1}{\alpha + \beta} \left(\alpha x_1 + \beta x_2 \right)$$

where x_1 and x_2 are the solutions of the system of equations (1) for $\alpha = 1$ and $\beta = 0$ and for $\alpha = 0$ and $\beta = 1$ respectively.

2. In the second part of the paper the problem of the stability of the solution of the system of equations (1) is considered. It is shown that the solution is stable for arbitrary values of the parameters α and β if and only if the condition $\alpha + \beta = 1$ is satisfied. In this case the solution is stable and is given by the formula

$$x = \frac{1}{\alpha + \beta} \left(\alpha x_1 + \beta x_2 \right)$$

where x_1 and x_2 are the solutions of the system of equations (1) for $\alpha = 1$ and $\beta = 0$ and for $\alpha = 0$ and $\beta = 1$ respectively.

3. In the third part of the paper the problem of the asymptotic stability of the solution of the system of equations (1) is considered. It is shown that the solution is asymptotically stable for arbitrary values of the parameters α and β if and only if the condition $\alpha + \beta = 1$ is satisfied. In this case the solution is asymptotically stable and is given by the formula

$$x = \frac{1}{\alpha + \beta} \left(\alpha x_1 + \beta x_2 \right)$$

where x_1 and x_2 are the solutions of the system of equations (1) for $\alpha = 1$ and $\beta = 0$ and for $\alpha = 0$ and $\beta = 1$ respectively.

SENIOR GRADE SECTION. (SOUTH PARK SCHOOL.)

"The Teaching of English: Should it be Analytic or Synthetic? . . . Miss A. E. Fraser, B.A.
Discussion opened by A. E. Miller, Esq.

"Geography" Thos. Leith, Esq.
Discussion opened by J. M. Campbell, Esq.

HIGH SCHOOL SECTION. (SOUTH PARK SCHOOL.)

"The Educational Value of Natural Science" G. H. Knowlton, B.A.
Discussion opened by H. M. Stramberg, B.A.

"A Foot-note to Botany" J. K. Henry, B.A.
Discussion opened by A. J. Pineo, M.A.

General Sessions.

THURSDAY,

2:00 P.

"The Octimal System"

"The Laying Out of Cities"

Resolutions.

Question Drawer..

8:00 P.

Music

Address by the Hon. The Minister of Education

Vocal Solo.. . . .

"The Debt of the United States to President Lincoln"

Musical Selection

Address

Music.. . . .

God Save the King

SDAY, APRIL 3rd.

2:00 P.M.

.....J. T. Wilson, Esq.

.....F. W. Caulfield, B.A.

8:00 P.M.

.....Cecilian Orchestra

Education.

.....Miss Jean Johnstone

President Elliot".....F. P. Graves, LL.D.

(President of the University of Washington.)

.....Arion Club

.....Rev. E. S. Rowe

.....Cecilian Orchestra

Save the King.



