2019-2020

Syllabus

Master's Degree of Education in Mentoring

New Generation Pedagogical Research Center

NATIONAL INSTITUTE OF EDUCATION, PHNOM PENH

1. CONTENT & ORGANIZATIONAL SUMMARY OF SYLLABUS STREAMS

INTRODUCTION

The New Generation Pedagogical Research Center will deliver a course syllabus lasting approximately 10 months. Students will be required to study 30 topics that are presented in a modular format. In all, there are 29 instructional modules of one credit each while the 30th module is a mini-thesis that will represent 6 credits. Each instructional module will require approximately 15 hours of instruction. The program will also include a practicum of 10 credits or 450 hours over a period of 3 months. With a total of 29 instructional modules (29 credits), a mini-thesis (6 credits) plus a two-month practicum that is the equivalent of 10 credits, the Master's Program will, therefore, require 45 credits for certification (see Table 1 below).

Table 1: Proposed Curriculum and Credit Structure

Curriculum Structure	Explanation	Remarks
Modular Units	• One module will cover one discrete topic • Each modular topic will require 15 hours of instruction	• There will be a total of 29 instructional modular topics during the 11-month program. • Each module will be comprised of a number of subtopics of which there are 89 in all. • Modular units will be classified into one of 4 curricular streams that are summarized below.
Credits	• 1 credit = 15 instructional hours = 1 module • 1 thesis credit = 30 hours of research & writing • 1 practicum credit = 45 hours of work/practice	• Candidates will be expected to successfully complete 45 credits for certification comprising **29 credits** from the study of modular units, **6 credits** for the completion of a mini-thesis, and **10 credits** for the completion of a 3-month practicum of 450 hours.
Instructional Time	• 15 hours per week (for modular instruction) • 56 hours per month	• The modular program will last for 11 months comprising a total of 435 hours of instruction.
Other Degree	• Mini-thesis	• 6 credits (see Stream 2 Module 7)

Requirements	• Practicum (10 credits)	• Mentoring 2 to 4 teachers over a 3-month period at a selected New Generation School (such as Sisovath HS)

In terms of content, the syllabus will focus heavily on teachers' moral development as professionals, academic leadership, mentoring techniques through which to provide leadership, the importance of countermeasures to root out rampant unprofessional behaviors among teachers, and the ideals described in the *New Generation School Policy* that was recently approved and adopted by MoEYS in 2016. The goal of the syllabus program is to produce teachers who are committed to NGS ideals and have the leadership and mentoring skills to influence other teachers as mentors once they are posted to their respective New Generation Schools. There will also be a strong focus on helping candidates to access key educational research in English, which they will be required to read and reflect on during seminar courses. At the end of the course, they will be required to present one research report or mini-thesis that they have actually conducted in a New Generation School, which must be written in English.

There will also be course work involving a 3-month Practicum at a selected New Generation School in which each candidate must provide mentoring support to 2 to 4 new NGS teachers (see Annex 1).

The Instructional Program Syllabus will be broken down into four curricular streams, which will be detailed according to a curricular template in which a sample is provided in Annex 2. These curricular streams include the following topics:

> **Stream 1:** Professional Ethics & Mentoring
>
> **Stream 2:** Educational Research in English
>
> **Stream 3:** ICT in Education
>
> **Stream 4:** General Methodological Systems & Principles

SUMMARY OF SYLLABUS STREAMS

Each stream is summarized by topic, subtopic, instructional hours, and assigned credits in the tables provided below:

STREAM 1: Professional Ethics & Mentoring

Module/Practicum Title	Number of Subtopics	Number of Instructional Hours	Number of Credits
1. Definitions of Teacher Ethics, Theories of Moral Development, and Codes of Behavior (Part 1: Individual Ethics)	4	15	1
2. Definitions of Teacher Ethics, Theories of Moral Development, and Codes of Behavior (Part 2: Group Ethics)	4	15	1
3. Ethics for Educational Leaders and Managers	7	15	1
4. Valuing the Individual Student: Issues relating to Labeling, Differential Needs, & Student Classification	5	15	1
5. Authority in the Classroom	6	15	1
6. Mentoring Principles: Theoretical Underpinnings (Part 1)	3	15	1
7. Mentoring Principles: Practical Applications (Part 2)	5	15	1
8. New Generation Schools as an Agent for Moral Social Change	3	15	1
Practicum: Applying Selected Principles of Mentoring to the Classroom (see Attachment)	--	3 months (450 Hours)	10
Subtotal: 8 Modules plus a Practicum	***37***	*120 Hours of Instruction* *3 Month-Practicum (450 Hours)* ***Total: 570 Hours***	***18***

STREAM 2: Educational Research in English

Module Titles (7 Modules)	Number of Subtopics	Number of Instructional Hours	Number of Credits
1. Distinguishing between the Different Kinds of Educational Research	2	15	1
2. Understanding the Role of Quantitative Analysis in Educational Research	2	15	1
3. How to Critically Read Educational Research: Useful Techniques and Principles in Critiquing Research Articles	2	15	1
4. English for Understanding Methods & Procedures in Research (Part 1)	3	15	1
5. English for Understanding Methods & Procedures in Research (Part 2)	1	15	1
6. How to Write Educational Research Papers: The Building Blocks of Writing Research Papers (Part 1)	2	15	1
7. How to Write Educational Research Papers: Applied Principles (Part 2) **Note:** Mini-Thesis (Degree Requirement)	1	180	6
Total (7 Modules)	**13**	**270**	**12**

STREAM 3: ICT in Education

ICT in Education (8 Modules)	Number of Subtopics	Number of Instructional Hours	Number of Credits
1. E-safety and Digital Citizenship	4	15	1
2. Using ICT to Maximize Presentations for Learning	3	15	1
3. Using the Internet as an Educational Resource	3	15	1
4. Student Self-Learning & ICT	2	15	1
5. Using Technology to Support Professional Learning Communities	2	15	1
6. Using Technology to Support Problem and Inquiry-based Teaching & Learning	3	15	1
7. Computational Thinking as a pedagogical tool	3	15	1
8. Using *Observic* as a Mentoring Tool	4	15	1
Subtotal (8 Modules)	*24*	*120*	*8*

STREAM 4: General Methodological Systems and Principles

Module Title	Number of Subtopics	Number of Instructional Hours	Number of Credits
1. What Knowledge Is and Where It Comes from.	4	15	1
2. Thinking about Learning: How People Learn	5	15	1
3. Promoting Critical Thinking in the Classroom	4	15	1
4. Thinking about Teaching (Building Blocks of Teaching)	4	15	1
5. Teaching & Learning for the 21st Century	3	15	1
6. Applied Educational School Models: Competency-based Education; Competitive Systems, Cooperative Systems	2	15	1
7. Principles of Student Assessment	4	15	1
Subtotal (7 Modules)	*26*	*105 Hours*	*7*

TOPICAL SUMMARY

Course Requirements	Number of Subtopics	Number of Instructional Hours	Number of Credits
29 Instructional Modules	88	525 Hours	29
Mini-Thesis	1	180 Hours	6
Practicum (2 Months)	--	3 Months (450 Hours)	10
Total	**89**	**1,155 Hours**	**45**

2. Practicum Guidelines

OVERVIEW

General Description

Master Degree candidates who are enrolled at the *New Generation Pedagogical Research Center* of the National Institute of Education will be expected to fulfill the requirements of a Practicum at the end of their classroom coursework. The Practicum will provide a realistic setting to help candidates put their understanding of Mentoring Principles into real practice. The Practicum will, therefore, provide an ideal opportunity for candidates to reinforce what they have learned during classroom discussions and research. As such, the Practicum will be an essential element of the preparation of each candidate to be an effective mentor when they return to their assigned schools.

Location

The Practicum requirement for receiving the *M.Ed in Mentoring* will occur in the New Generation School at Preah Sisovath and Prek Leap HS in Phnom Penh. This school offers one of the most advanced public school settings in Cambodia and is conveniently located close to the National Institute of Education.

Duration

The Practicum will last for 2 months at the end of each academic year (8 weeks) during June, July, and August.

Credits

The Practicum will be equivalent to 3 modules in NGPRC syllabus or 3 credits.

Practicum Content Summary

The credibility of a mentor depends on his or her ability to do the job of a teacher. Therefore, the practicum comprises a small number of teaching demonstrations. A total of two or three demonstrations are anticipated during the required Practicum. In agreement with the supervising instructor from the center and the senior classroom

teacher who hosts the practicum, the trainee will plan and implement a lesson using new or unusual techniques that were researched during earlier course work at the center. This demonstration can take the form of co-teaching with the normal teacher or other modalities that are agreed with the trainee, the supervisor, and the host teacher.

To be sure, teaching at a secondary host school will not be the main task of the mentor during the Practicum. The central set of tasks of the practicum will consist of classroom observations. The trainees will observe the lessons of junior teachers at Sisowath H.S. to provide them with feedback and support. Trainees may be expected to work closely with teachers that they mentor in lesson preparation, planning meetings, and other forms of collaboration as recommended during mentoring coursework.

All the lessons observed during the practicum will be filmed as part the new *Observic* platform, which will be a key tool to ensure that the mentoring process is optimal. The trainees conduct themselves the utilization of *Observic*, from the footage to the final report.

PRACTICUM OBJECTIVES

The following objectives have been identified as benchmarks to assess the degree to which trainees were able to successfully complete their Practicum coursework:

1. Trainees can prove their teaching abilities, by successfully undertaking classroom demonstrations and co-teaching.

2. Trainees can reflect on their own practice, both verbally and in writing, through various self-assessment tools, including *Observic*.

3. Trainees can conduct effective conferences with assigned teachers, as measured by agreed guidelines, to prepare lessons and provide relevant feedback.

4. Trainees can observe the teacher's skills with benevolence and in a non-threatening manner.

5. Trainees can provide feedback to assigned teachers 'constructively' and in accordance with guidelines discussed during previous coursework.

6. Trainees can write reports for the benefit of the assigned teacher, including a description of the lesson(s) observed and answers to the questions that the teacher might ask.

7. Trainees can effectively use *Observic* for all the main purposes for which it is intended, as these pertain to the needs of the mentee and as mentor. This includes the footage of a video, the submission of the video for review, self-assessment and the full review of someone else's video (exclusive of administrative tasks).

IMPLEMENTATION

Detailed Preparations to Complete the Practicum at the hosting school

Identifying Assigned Teachers

There is obviously a balance to be found between the learning needs of students, of the Sisowath teachers who will be mentored, and the development trainees' needs. In order to effectively organize the practicum, the Director of Sisowath HS will provide a list of teacher candidates who are interested in receiving mentoring support from trainees enrolled at the New Generation School Training Center.

The teachers who work with mentees will do so voluntarily and do not necessarily need to be 'elite' teachers. Assigned teachers may also be 'beginners' who want to learn new techniques or to get feedback about their current methods of teaching. Nevertheless, they must agree to be observed by a small team of young mentors and be ready to spend time to discuss with NGPRC master's candidates about the preparation for teaching before and after class. Assigned teachers must also provide lesson plans and all necessary material. The assigned teachers should provide their timetables in advance, including planned tests and other special activities, so that the NGPRC can find the best time to observe their classrooms.

Participating in this practicum as an observed teacher should be seen as an opportunity to improve one's teaching skills and better understand the process of mentoring, which is different from 'inspection.' Teachers who are struggling with difficulties or who want to advance in their career should be encouraged to participate.

Team Work

Although trainees are evaluated individually, they will undertake classroom observations in teams. Each team will be comprised of 4 or 5 trainees under the supervision of a Center Instructor or a Mentor who is working at the NGPRC. There will 6 teams in total comprising 24 or 25 individuals.

During an observation session, trainees must fulfill different roles, including the following:

- Team leader and main reviewer
- Demonstrator or co-teacher, as relevant,
- Technical supporter for *Observic* (taking video footage and editing),
- Deputy reviewer.

Trainees will take turns in fulfilling these roles so that every trainee will have taken on every role at least twice during the practicum.

Team Composition

As the time for the Practicum approaches, the teams will be organized during a general meeting of all NGPRC faculty members at the New Generation School Training Center at NIE.

Faculty members will assign trainees to a team according to the following criteria and considerations:

- A review of Core Abilities (e.g., Critical Thinking Skills, Learning Styles, etc.) and academic background (e.g., STEM, Arts, Social Science, Language, etc.),
- The needs of the assigned teachers of Sisowath H.S and Prek Leap HS. in the core subjects
- A review of trainees' personality and leadership capabilities, in order to obtain well-balanced teams.

The teams will remain the same until the end of the practicum. Under exceptional circumstances, team members can be changed by a common decision of the NGPRC manager and mentors. In any case, the staff members overseeing the Practicum will ensure the consistency of the training. Before changing the composition of a team, 2 supervisors can shift their positions temporarily in order to get a better understanding of the circumstances.

Each team can be expected to work with several teachers of Sisowath H.S. The schedule will be designed to find a good balance between the needs of Sisowath H.S. and the needs of NGPRC trainees.

Typical Observation Session

The Supervisor (NGPRC Mentor or Instructor) of the trainees will intervene as little as possible as trainees build a relationship with their mentees. Supervisors will provide comments and observations to the trainees at the very end of a session, when everything is wrapped up.

Each week, the Supervisor will designate the main reviewer, who will then be responsible for overseeing the training sessions and regular meetings. The assigned teachers should also join these meetings. The leader of the week will:

- Organize the schedule and the agendas of the meetings
- Facilitate each scheduled conferences and animate the discussions
- Distribute roles for the other participants, according to their training needs and skills

- Give assignments to the other members of the team, such as *Observic* reviews or preparation tasks
- Conclude and summarize the debates
- Identify any problems that may have occurred during the week and lead trouble-shooting discussions, as needed.
- Write down and sign the meeting report, which should also be co-signed by the Supervisor.

At the end of each week, the Supervisor will organize a short meeting (approximately 1 to 2 hours) with the trainees only (no Sisowath or Prek Leap assigned teachers), to evaluate their work briefly, set new objectives and designate the next team leader. He gives personalized recommendations in writing.

First Week of the Practicum

The first week of the Practicum will provide exploratory meetings and orientations to trainees to better understand how the Practicum is supposed to unfold. These orientations will include a tour of the school and introductions to relevant staff members at the school. The Supervisor will act as a team leader to demonstrate how assigned tasks are to be completed. He or she implements a "think aloud" strategy in which he comments on his own actions.

END-OF-PRACTICUM REPORT

At the end of the Practicum, the trainees will write a report about one significant problem that they encountered during the training and propose solutions. The reports should follow a standardized format that will include the following headings:

1. **Section 1:** Identification of the Problem (e.g., Age Differentials Create Challenging Communication)
2. **Section 2:** Discussion of Relevant Research or Documentation
3. **Section 3:** Strategies to Achieve Resolution/Assessment of Effectiveness in Resolving Problems
4. **Section 4:** Conclusion

Trainees will receive a briefing from their Instructors/Supervisors about how to write the Thesis according to this format and provide individual conferencing in order to ensure that the best topic is addressed. Compelling theses will be archived in order to provide good models for future cohorts.

ASSESSMENT OF THE PRACTICUM

Data Collection Methods

Trainees will be evaluated individually by their Supervisor using a diverse set of assessment tools that include the following:

- Classroom Observations
- Meeting Participation Rating Scales
- Software Utilization Rating Scales
- Individualized Conferencing Assessments
- Quality of Thesis Completion

Ensuring Reliable Assessment

When in serious doubt with an individual case, a supervisor can ask a colleague to assist in order to get a second opinion and ensure that all assessments are reliable. This should be more the exception than the rule in order to avoid an excessive disruption of the training. The first supervisor remains responsible for the grading of the given trainee, unless the Center Manager says otherwise.

The grading process will cover the assessment of activities during the entire length of the Practicum. Practicum assessments will not necessarily be based on an average of unchangeable scores. Nor will it take the form of a final exam. Trainees will be continuously evaluated based on dynamic scoring so that rapid progress at the end of the Practicum will outweigh poorer scores received at the beginning.

A trainee who has validated all the required skills continues to participate to the work of his team until the official end of the practicum. Grades can be revised by the instructor until the end of the practicum.

Assessment Criteria

Trainees will be graded on a diverse set of criteria, which are summarized below:

Teaching skills

- The ability to demonstrate specific techniques convincingly.
- The ability to explain one's choices during the Practicum and their limitations (e.g., relevance, expected benefits, points of attention), so that another teacher can imitate him.

Self-assessment

- The ability to identify one's strengths and use them to one's advantage.
- The ability to be lucid about the difficulties one encounters and how to effectively resolve them.
- The ability to assess the outcomes of one's own lessons in terms of students' achievements and motivation.
- The ability to use *Observic* to do a self-assessment.

Leadership

- The ability to plan effectively the work of other people, giving them all necessary information and instructions.
- The ability to create the conditions for effective and harmonious team work.
- The ability to conduct conferences so that every stakeholder has an opportunity to share his/her opinions and concerns.
- The ability to facilitate conferences so that they have positive & concrete outcomes.

Observation Skills

- The ability to pay attention to the material conditions of the lesson.
- The ability to observe and understand the reactions of students.
- The ability to understand the purpose and the organization of activities.
- The ability to pay attention to the security and well-being of all persons in the classroom and reports any problems in this regard to the Supervisor.
- The ability to respect the authority of the teacher.

Counseling

- The ability to understand the objectives and constraints of assigned teachers.
- The ability to provide relevant and constructive feedback to assigned teachers and colleagues.
- The ability to effectively respond to questions and concerns of the assigned teacher and to take these concerns into account.
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USING *OBSERVIC* DURING THE PRACTICUM

The New Generation School Training Center seeks to empower trainees with knowledge of cutting-edge developments in 21st Century pedagogies and tools. This includes dynamic software mentoring programs such as *Observic* that will form a key part of the skill set imparted to trainees. NGPRC trainees will need to fully comprehend how the *Observic* platform works in two very different ways. First, they will be observed (as a mentee), as any other teacher might be, using this software. This will help them to better understand the use of the software as a mentee. But they will also be expected to

use the software as a mentor for assigned teachers, giving them a very different perspective on the use of the software (as a mentor). These dual experiences will help trainees to gain a strong understanding of how to use this software effectively.

3. The Mini-Thesis

Number of credits: 6 Credits

As the NGPRC project is meant to promote significant changes in the Cambodian school system, it would be fruitful to use the Educational Research in English stream to improve the availability of research material for teachers who are not part of the Center.

Cambodia lacks serious material in its national language. Therefore, in order to remain up-to-date, teachers have no choice but to rely on international research. Only a few of them can do this work, because of the low level of the population in any foreign language. The few who can read extensively in English or other languages have a very strong advantage to work in the private sector and seldom choose a career in education.

Assignments such as translations from English to Khmer, research article (primary research), and review article (synthesis) in Khmer could contribute to solve this problem. The topic of the mini-thesis can be whatever the trainees are interested in, providing it is researchable, ethical, and significant for specific schools or for the Cambodian educational system as a whole. The thesis will be started from the beginning of the program so that trainees have 10 months to do it. The *Educational Research in English* course will help trainees understand how to achieve it properly.

WHAT AMOUNT OF WORK?

Since the training includes a long practicum, it has been decided to restrain the thesis to a reasonable size. The Master's Degree of Education in Mentoring is a professional degree and research is just an important side-note. The purpose of NGPRC isn't to train full-time researchers, but experts who can do short-term research to answer the practical problems of their mentees. Therefore, we prefer to limit the quantity in order to preserve the quality. Short but serious, the thesis should comprehend at least 25 pages for review article or primary research, if it's done in English, or 30 pages if it's done in Khmer. For translation, it should be longer, but the exact length will depend on various considerations, such as the difficulty of the book or documents to be translated and, of course, the consistency of the extracts.

LANGUAGE

The thesis can be written in English or in Khmer. For practical reasons (readability of the thesis), we encourage the trainees to write in Khmer, but the choice is theirs.

In any case, the research should use sources in English.

The abstract must be written in English and Khmer, for referencing.

CHOOSING TOPICS AND SUPERVISORS

The topics are chosen by the trainees with the approval of a supervisor of NGPRC. The supervisors can be any full-time instructor of NGPRC or the training coordinator, depending on their availability. Each trainee must choose one topic and one supervisor by the end of September.

Trainees are strongly encouraged to choose a topic related to teaching issues they have encountered or witnessed during their previous practice. Remember than the ultimate goal of educational research is to improve student learning.

KINDS OF RESEARCH

During the school year, trainees do a mini-thesis on one of the following kinds.

Primary research

Primary research is a kind of research that may vary depending on your field or on the topic (experiments, survey, interview, questionnaire, etc.), but the authors need to collect and analyze raw data. The research paper will be based on the analysis and interpretation of these data. It is not easily feasible in an intensive master program, because of time scale and cost. However, if a highly motivated trainee is willing to conduct in-class experiments for a reasonably short period of time, it could be interesting to do it in partnership with an NGS high school which might be their placement after graduation.

Of course, the research protocol should be approved by NGPRC staff, as well as the staff of the school where the trainee intends to gather data, in order to avoid actions that may prove too disruptive for students' learning. Don't forget that the final goal is students' achievement through staff development, not staff development itself.

Review article (Research synthesis)

Participants are required to write a synthesis of about **25 pages in English** or **30 pages in Khmer** (not including reference list and appendix), on a given issue. They must use international research material as an academic background.

The exercise consists in a summary and a comparison of several articles about education, presenting relevant and opposite points of view.

Priority should be given to subject-based teaching techniques, practical or epistemological approaches, rather than broad reflections on the school system itself. In effect, the former would be directly useful for Cambodian teachers, while the latter would remain more speculative.

Of course, we expect state-of-the-art work for such research review, including structure, commented bibliography, glossary and so on. A critical approach of the resource material is a prime requisite.

Translation

Participants are required to translate quality material, book chapters or articles, into Khmer for immediate availability.

This translation should include a **critical apparatus** to assert the seriousness of the translated work and its relevance for a Cambodian context. This apparatus should comprehend a foreword and comments as well as a glossary to elicit difficult concepts or foreign customs.

As translation requires less personal involvement, this work can be slightly longer than other kinds of research papers.

Keep in mind that the translation material must be useful for other teachers.

SUBMISSION SCHEDULE AND DESCRIPTION

The schedule for mini-thesis (Primary Research)

The thesis will be collected based on the schedule below.

Stages	Submission schedule	Other
Concept note	30th September 2019	Must be approved by supervisor and committee.
Finding sources	30th October 2019	Trainees must work with their supervisor.
Critique of sources (Literature Review)	30th November 2019	Trainees must work with their supervisor.
Research Proposal (Introduction, Literature Review, and Methodology)	30th December 2019	Must be approved by supervisor and committee
Data collection	After the approval of proposal	Should get administrative support from the center.
Full draft of findings	30th April 2020	Review and feedback from peers and supervisors.
Final Defense	July 2020	Must be approved by supervisor and committee
Final Submission	August 2020	The committee checks again before publishing
Publishing		

Below is described each stage that you have to complete in that timeframe.

- ✓ **Concept note:** It will provide a general image on what kind of problem you are seeking to research. This is more than a proposed research topic. It includes a short background information of the topic, research problems, research objectives, and research questions. A clear description of these things will help you a lot to find the relevant sources for the literature review part.

    - ○ *A Research Topic (the topic should be written in specific issue and based on what you are interested in and also be attainable and feasible)*

    - ○ *Background (information related to what you are going to study, from the broad context to specific points)*

    - ○ *Research Objectives (please write down few points of what you are going to research)*

    - ○ *Research Questions (what are the research questions that you are trying to answer)*

- ✓ **Finding sources:** You might have found some sources already while preparing the concept note. This is more than that, you have to find many different sources related to your study and use those for literature review part. You can find the relevant sources from libraries, book, journal article, research report, news, etc. With those relevant sources, you have to write them in a list by using APA Style 6th Edition. By doing so, it would benefit you to find further information on and use the list as reference in an appropriate way.

- ✓ **Literature review:** It is a process of searching through existing books, articles, manuscripts, documents or data related to your research problem in order to develop a theoretical and conceptual framework for a research study. Through this review you acquire an understanding of what is known or not known about the topic, detecting first the knowledge gaps that might become research problems, and then refining them to be able to define specific research questions. The process can clarify your ideas and help you to develop the research methodology and define the research design in appropriate way.

A Literature review will start by identifying what you need to know in order to document the other research paper:

- ✓ What research has already been done on this topic?

- ✓ What are the sub-areas of the topic that need to be explored?

- ✓ What other research (perhaps not directly on this topic) might be relevant to your investigation?

- ✓ How do these sub-topics and other research overlap with the topic that you have in mind?

- ✓ **Research Proposal:** is a written document that clearly describes introduction section, literature review, and methodology. You have to choose appropriate research design, sample of the study, sampling techniques, research tools, data analysis plan and tools, data collection plan, and scope and limitation of the study. Remember that your research questions can change if you find that it is necessary to change after reviewing literature. You have to defense this proposal in order to get some feedback and comments from committee,

which will help you to make everything clear and objective before gathering data.

- ✓ **Data Collection:** It will be based on what you have planned for gathering the information from your target group. Remember that you have to study full-time (Monday to Friday) so there might be difficult to allocate time to collect data. However, you have a short vacation after the first term and this might be good for you to collect data during this time. You can also design a strategy with school directors and other staff, but remember that data collection can be perceived as disruptive by some teachers. Your protocol must be approved by your supervisor.

- ✓ **Draft of report:** This draft will cover the findings and discussion of the findings. This is essential to get feedback from your supervisor and your peers before the final thesis defense. Even though it is a draft, be aware that it must be a good one.

- ✓ **Final Defense:** When a trainee has developed a thesis which is acceptable by the supervisor, a thesis committee responsible for overseeing the progress of the trainee's thesis is appointed. The committee is a team who give the score and ask for change if needed before the thesis is approved for publishing.

The schedule for mini-thesis (Review Article)

The thesis will be collected based on the schedule below.

Stages	Submission schedule	Other
Concept note	30th September 2019	Must be approved by supervisor and committee
Finding sources	30th October 2019	Trainees must work with their supervisor.
Critique of sources	30th November 2019	Trainees must work with their supervisor.
Materials and Methods	30th November 2019	Trainees must work with their supervisor.
Proposed outline of the paper (Body Section) OR concept map	30th January 2020	Must be approved by supervisor and committee
Writing the body section (draft) and rewrite - draft the introduction - draft the methods section (if needed) - draft the body sections	3 months	Trainees must work with their supervisor.

- draft the conclusions - draft the abstract		
Full draft of findings	30th April 2020	Review and feedback
Final Defense	July 2020	Must be approved by supervisor and committee

Below is described each stage that you have to complete in that timeframe.

- ✓ **Concept note:** It will provide a general image on what kind of problem you are seeking to write a review article. This is more than a proposed research topic. It includes a short background information of the topic, research problems, research objectives, and research questions. A clear description of these things will help you a lot to find the relevant sources for the body part of your paper.

  - ○ *A Research Topic (the topic should be written in specific issue and based on what you are interested in and also be attainable and feasible)*

  - ○ *Background (information related to what you are going to study from the broad context to specific points)*

  - ○ *Research Objectives (please write down few points of what you are going to research)*

  - ○ *Research Questions (what are the research questions that you are going to seek for)*

- ✓ **Finding sources:** You might have found some sources already while preparing the concept note. This is more than that, you have to find many different sources related to your topic and use those for developing the body part. You can find the relevant sources from libraries, book, journal article, research report, news, etc. With those relevant sources, you have to write a list by using APA Style 6th Edition. By doing so, it would benefit you to find further information on and use the list as reference in an appropriate way.

- ✓ **Critique of sources:** After you've got relevant sources, you must read them carefully. You have to use a critical and constructive analysis of the literature in a specific field through summary, classification, analysis, and comparison. This process is really important in writing review article since it would provide you a clear picture of what you are going to write down on your paper.

- ✓ **Materials and Methods:** you have to state what kind of method you use to develop your paper and demonstrate your materials or sources are scholarly or/and empirical.

- ✓ **Proposed outline of the paper (Body Section):** You have to propose subheadings in your body section, which reflect the organization of the topic and indicate the content of the various sections. Then, your writing must be aligned with the subheading you proposed. You can prepare the heading based on many ways such as studies that agree with another versus studies that disagree, from broad to specific (universal, galaxy, and star), chronological order, geographical location, etc.

- ✓ **Writing the body section (draft) and rewrite:** This is a process that you have to do again and again in order to ensure that your paper is good enough. Remember in writing review article, you must be idea-driven rather than literature-driven. All of your arguments must be well-organized and clear with precise objective. You must use many different pieces of information to support the arguments. The review article is written for more general readers so it must be written in a simple structure.

- ✓ **Full draft of findings:** This draft will cover the introduction part, method and materials used, all of the arguments raised in main part, conclusion, and reference list. This is essential to get feedback from your supervisor and your peers before the final thesis defense. Even though it is a draft, you have to aware that it must be a good one.

- ✓ **Final Defense:** When a trainee has developed a paper which is acceptable by the supervisor, a thesis committee responsible for overseeing the progress of the trainee's thesis is appointed. The committee is a team who give the score and ask for change if needed before the thesis is approved for publishing.

The schedule for mini-thesis (Translation)

The thesis will be collected based on the schedule below.

Stages	Submission schedule	Other
Concept note	30th September 2019	Must be approved by supervisor and committee
Finding sources	30th October 2019	Trainees must work with their supervisor.
General analysis of the text to be translated	30th November 2019	Trainees must work with their supervisor.
Linguistic analysis	30th November 2019	Trainees must work with their supervisor.
Proposed outlines of the translation	30th January 2020	Must be approved by supervisor and committee
Translation	3 months	Trainees must work with their supervisor.
Full draft of the translation, with foreword, glossary and all the relevant appendixes.	30th April 2020	Review and feedback from peers and supervisor
Final Defense	July 2020	Must be approved by supervisor and committee

Below is described each stage that you have to complete in that timeframe.

- ✓ **Concept note:** This is more than the choice of a title. It must clarify the purpose of your translation, before you spend too much time on it. A proper concept note will save your time and efforts during your research. It must answer a series of questions:

  - o What is the pedagogical value of the text to be translated, i.e. the kind of problems it helps solve?

  - o What is its historical importance, if any, and the qualification of its author?

  - o How can it be related or adapted to the Cambodian context? Why should a Khmer teacher read it?

- ✓ **Finding sources:** It might seem weird to talk about sources for a translation, as the main source is the text itself. However, there are a lot of additional pieces of information you need in order to get a deeper comprehension of it. In some cases, due to the cultural or historical distance, this information might be absolutely necessary. Depending on the complexity of each aspect, it will be explained in a foreword, a glossary or footnotes.

This includes, but is not limited to:

- o The life of the author, if his personal experience is relevant to understand his approach,

- o The historical and social context of writing,

- o The reception of the text in its country of origin and in other places,

- o The school system of the country of origin, to elucidate cultural references.

NB: As the book to translate will probably be quite recent, there should not be any problem with establishing the text itself. However, you should consider that pedagogical books often come in various versions. In this case, it might be necessary to compare them to establish the most probable or most suitable text.

- ✓ **General analysis:** The main quality of a translation is to be faithful. You must scrupulously respect the intentions of the author. However, to do so, you must analyze the text carefully, not only to catch its explicit meaning, but also to understand what is only implied. You must understand the mindset of the author. If the text is ironic or optimistic, if it's serious or comic, your translation must reflect it. That's where it is important to have a critical mind. If the interpretation of the text is debatable, you must be able to explain your own understanding in the critical apparatus (generally in a foreword).

- ✓ **Linguistic analysis:** This is a very important part of the translation work, especially when the text is long. It concerns mostly the vocabulary, but also the grammar and the style of the text. At first, you must identify the key words in the text, in order to find a consistent translation for them. By "key words" we don't mean only technical words that are obviously complicated, but also common words that are used in a specific meaning.

Before you decide how you should translate them, you need to do a few things:

- Define those words carefully, in the context, and check if the author uses them consistently. It's possible that he uses different meanings of the same word, willingly or not. In some cases, a translation can reveal flaws in the reasoning.

- Check if there is an official or conventional translation. It's very important for scientific papers or for administrative acts. Be careful, however, that the "official" translation might reflect very different situations. A 6-grader can be in primary or secondary school, depending on the country. Any significant difference should be explained in footnotes or in a glossary. Make sure that the official translation matches with the intents of the author.

- Explain your choices for translating the key words.

As for grammar and stylistic analysis, it depends on the difficulty of the text and your own proficiency in English.

- ✓ **Proposed outline of the paper:** At this stage of the research work, you must be able to explain your strategy to do a good translation. The outline should include a description of the annexes and foreword you want to include in your thesis.

- ✓ **Writing the translation (draft) and rewriting:** This is a process that you have to do again and again in order to ensure that your paper is good enough. Remember in writing translations, you must respect the meaning of the text scrupulously, but also find a form that is consistent with the intents of the author. As you will translate academic paper, you should lean on accuracy and avoid the "beautiful unfaithful" translation. But style isn't to be neglected entirely, as it conveys important parts of the message.

- ✓ **Full draft of findings:** This draft will comprehend all the critical apparatus, the translation itself, conclusion, glossary and reference list. This is essential to get feedback from your supervisor and your peers before the final thesis defense. Even though it is a draft, you have to be aware that it must be a good one.

- ✓ **Final Defense:** When a trainee has developed a paper which is found acceptable by the supervisor, a thesis committee responsible for overseeing the progress of the trainee's thesis is appointed. The committee is a team who give the score and ask for changes if needed before the thesis is approved for publishing.

4. Curricular Streams

Stream 1: Professional Ethics and Mentoring

(8 Modules)

Topic List

Module 1: Definitions of Teacher Ethics, Theories of Moral Development, and Codes of Behavior (Part 1)	**Topic 4.5: Using the Theory of Multiple Intelligences as a Means to Value the Potential of All Students**
Topic 1.1: Teacher Ethics & the Relationship with Theories of Moral Dev't	**Module 5: Authority in the Classroom (20 Hours)**
Topic 1.2: The Ethical Duties of a Professional Educator	Topic 5.1: Factors Affecting a Teacher's Authority in the Classroom
Topic 1.3: Private & Professional Lives	Topic 5.2: Deterrence, A Dangerous Concept
Topic 1.4: Improper Personal or Financial Gain among Teachers	Topic 5.3: School Regulations & Standard Routines
Module 2: Definitions of Teacher Ethics, Theories of Moral Development, and Codes of Behavior (Part 2)	Topic 5.4: Common Routines & Procedures in the Classroom
Topic 2.1: The Ethical Colleague	Topic 5.5: Practical Exercises, Voice, & Body Language
Topic 2.2: Creating an Ethical School Climate	Topic 5.6: Case Studies, Awkward Situations
Topic 2.3: Teaching in a Diverse Society	**Module 6: Mentoring as a Teacher Development Approach (Part 1: Theoretical Considerations**
Topic 2.4: The Impact of Traditional School Culture in Cambodia on the Instruction of Morals and Civics	Topic 6.1 Mentoring as an Approach to Changing Teaching Behaviors
Module 3: Ethics for Educational Leaders and Managers:	Topic 6.2. Mentoring versus Inspection
Topic 3.1: Working Together as a Team	Topic 6.3: The Difference between Mentoring & Teacher Supervision
Topic 3.2: subsidiarity, a difficult balance between autonomy and monitoring:	**Module 7: Mentoring as a Teacher Development Approach (Part 2: Practical Applications)**
Topic 3.3: Practical organization	Topic 7.1: Establishing the Credibility of a Mentor
Topic 3.4: Security & Well-Being of Students	Topic 7.2: A Mentor's Need to Build Trust and an Effective Relationship
Topic 3.5: Moral education and exemplarity	Topic 7.3: Enhancing a Mentee's Knowledge of Subject Expertise and Standards
Topic 3.7: Animating a Team of Teachers (Same Subject or Interdisciplinary)	Topic 7.4: Useful Methods Through Which to Create a Professional Relationship between a Mentor and a Mentee
Module 4: Valuing the Individual Student: Issues relating to Labeling, Differential Needs, & Student Classification	Topic 7.5: How Mentors Should Deal with Unethical Behaviors When They Occur:
Topic 4.1: The Ethics of Ability Groupings and Student Tracking	Topic 7.6: Understanding the Influence of Observation on Behavior
Topic 4.2: The Bell Curve and the Roots of Inequality in the Classroom	**Module 8: New Generation Schools as an Agent for Moral Social Change**
Topic 4.3: Alternative Approaches for Addressing Differential Abilities Among Children	Topic 8.1: What is a New Generation School?
	Topic 8.2: New Generation Schools as Part of the Education Reform Landscape in Cambodia
Topic 4.4: Automatic Promotion as a Means to 'Value' the Student – Theory & Actual Practice	Topic 8.3: New Generation Schools as a Threat to the Status Quo

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 1: Definitions of Teacher Ethics, Theories of Moral Development, and Codes of Behavior (15 Hours)			
Topic 1.1: Teacher Ethics and the Relationship with Theories of Moral Development: This topic explores the links between *Theories of Moral Development* and *Ethics.* The instructor will present various Theories of Moral Development including those developed by Kohlberg (1981) and Gilligan (1982). Following from a clear understanding of 'Ethics in Teaching', Trainees must then consider how we define ethical principles and how these principles can actually be applied to teacher behaviors. Trainees will employ what are known as *Moral Dilemma* stories to create situations that require the use of an ethical principle to actually guide one's behavior. **Key Discussion Questions:** 1. Who was your favorite teacher? Why? Identify the ethical dimensions inherent in the reasons you cite. 2. What is your philosophy of teaching? How does your philosophy of teachers communicate your personal ethical code? 3. Is it fair that teachers are held to a higher standard of conduct than other professions? Is it fair that these conduct expectations apply to a teacher's personal life as well as his or her private life?	• **1.1a:** Trainees can describe various Theories of Moral Development including Kohlberg's Taxonomy of Moral Development & Gilligan's Stages of Ethical Development. • **1.1b:** Trainees can explain the relationship between Ethical Principles and Theories of Moral Development. • **1.1c:** Trainees can demonstrate the links between specific moral principles and codes of moral behavior. • **1.1d:** Trainees can use *moral dilemmas* to demonstrate the links between Ethical Principles and actual applications to codes of behavior.	*Professional Ethics and Commitment in Teacher Education* https://www.researchgate.net/publication/277632176_PROFESSIONAL_ETHICS_AND_COMMITMENT_IN_TEACHER_EDUCATION *The Ethics of Teaching* https://www.pspc.education.pa.gov/Promoting-Ethical-Practices-Resources/Ethics-Toolkit/Unit1/Pages/The-Ethics-of-Teaching.aspx	• **Individual Presentations:** Using 'Moral Dilemmas' as a means apply ethical principles: In such exercises, Trainees will be expected to develop a Moral Dilemma on their own and then apply one or more sets of moral principles to justify a course of action.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
4. How can teachers' individual lessons, classroom activities and interactions with students implicitly communicate their ethical perspective? **Hours:** 6 Hours			
Topic 1.2: The Ethical Duties of a Professional Educator This topic helps Trainees to review codified standards of ethical behavior for educators in general. Trainees will be asked to consider key organizing principles in ethical codes such as Conduct Towards Students, Conduct as this Relates to Performance and Professional Practices, etc. Two exemplars are used in this topic for purposes of comparison and contrast. Trainees will be expected to find key commonalities in codes of conduct in the exemplars provided and determine how well Cambodian teachers generally comply with these ethical commonalities. Student assessments will likely be different requiring Trainees to provide justifications for their conclusions. ***Key Discussion Questions:*** 1. What are key commonalities and differences between the ethical codes of conduct considered? 2. Which principles of ethical conduct are the most important and should receive the highest priority in	• **1.2a** Trainees can identify the similarities and differences between various exemplars of teacher ethical codes. • **1.2b** Trainees can determine key commonalities between codes of conduct for teachers that are most relevant to the Cambodian context. • **1.2c** Trainees can determine how well Cambodian teachers in general comply with the key commonalities	*Code of Ethics for Educators (an example from the United States)* *https://www.aaeteachers.org/index.php/about-us/aae-code-of-ethics* *Code of Ethics for Professional Teachers (an example from the Philippines)* *http://teachercodes.iiep.unesco.org/teachercodes/codes/Asia/Philippines.pdf*	• **In-class Group Work:** Trainees will be asked to determine areas of compliance with selected ethical codes where Cambodian teachers are strongest and those where they are weaker. Each group will be required to justify their assessments should differences arise. This assignment will be undertaken as an in-class exercise.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Cambodia? 3. Which ethical codes of behavior are Cambodian teachers most in compliance with and which codes are they most delinquent in addressing? **Hours:** 4 Hours	in teacher codes of conduct that they have identified.		
Topic 1.3: Private & Professional Lives: It is a widely accepted view that teachers must be moral exemplars in their community. In this unit, we explore the relationship between a teacher's personal behavior and his or her worth as a teacher. Usually, a teacher's performance is judged in terms of their knowledge of subject matter and their ability to teach 'effectively.' But should personal behaviors involving spousal abuse, gambling, questionable sexual morals, and other behaviors affect their value as a good teacher. Trainees will examine some case studies to explore such issues and form their own conclusions about the relationship between personal and professional teacher behaviors. All conclusions must be justified with logical explanations. *Key Discussion Questions:* 4. Do the personal behaviors presented in the case studies have any direct impact on the teacher's performance in the classroom? 5. Should determinations of 'direct impact' on teaching be the primary consideration in determining whether personal behaviors violate certain codes of ethical behavior for teaching?	• **1.3a** Trainees can clearly explain the relationship between personal and professional behaviors in the context of Teachers' Professional Ethics. • **1.3b** Trainees can make clear judgments about the personal behaviors that should NOT be allowed by teachers by providing clear explanations for the rationale for their determinations.	*Private and Professional Lives* https://www.pspc.education.pa.gov/Promoting-Ethical-Practices-Resources/Ethics-Toolkit/Unit2/Pages/default.aspx	• **Writing Assignment:** Trainees will be asked to provide written papers that justify their conclusions on the relationship between personal and professional behaviors using a number of case studies presented in class.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
6. What are some specific areas where personal behaviors should not be allowed for a teacher and those that can. How do you justify your answer? **Hours:** 4 Hours			
Topic 1.4: Improper Personal or Financial Gain among Teachers Teaching is considered to be a 'helping profession.' That means that one enters the teaching profession to help children and students learn and grow. Nevertheless, the primary motivation for many individuals in Cambodia to enter the teaching profession is to make money. Discussions under this topic explore the conflicts of interest that arise when teachers seek financial gain from executing their responsibilities as teachers, especially for private tutoring. Trainees will also consider the broader implications of teachers' behaviors on the young people that they teach when they blatantly seek financial gain from those in their care (e.g., does it model corrupt behavior?). *Key Discussion Questions:* 1. Many educators consider teaching to be a 'Helping Profession.' Nevertheless, many Cambodian teachers routinely link their teaching to demands for money from their students. How do you reconcile the belief that teaching is a helping profession with this common	• **1.4a** Trainees can identify the conflicts of interest that arise from private tutoring for financial gain. • **1.4b** Trainees can explain why most educators consider teaching to be a 'helping profession.' • **1.4c** Trainees can provide a critique of teacher practices that relate to financial gain based on reading exercises that they have read. • **1.4d** Trainees can explain why New Generation Schools prohibit private classes during working hours. • **1.4e** Trainees can	*Curbing Private Tutoring and Informal Fees in Cambodia's Basic Education,* Phnom Penh: UNDP, 2015. (pp 3-8) *(To be distributed to Trainees)* *Hidden Privatization of public education in Cambodia: Equity implications of private tutoring. Journal for Educational Research Online,* Vol 6, No 1, 94-116. (Author: Brehm, W. & Silova, I. (2014)) *Improper Personal or Financial Gain among Teachers* *https://www.pspc.education.pa.gov/Promoting-Ethical-Practices-Resources/Ethics-Toolkit/Unit6/Pages/Introduction.aspx*	• **Individual Assignment:** Trainees must write a 5-page report that documents guidelines about financial gain among teachers in other countries and explore how these guidelines could be feasibly implemented in the Cambodian context.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
behavior in Cambodian schools? 2. What sorts of conflicts of interest arise from tutoring one's own students? 3. In New Generation Schools, private classes for one's own students are strictly prohibited. What are some of the reasons that you think that this prohibition is in place? 4. Are there any conditions under which you can imagine that private classes might be allowed to occur? 5. The teacher in one of the case studies provided under this topic was nominated three times for Teacher of the Year award in her district. Do these accolades matter in how this situation would be handled in a criminal court? Should it matter in how the case would be adjudicated by a court? **Hours:** 6 Hours	document practices of integrity as these relate to financial gain among teachers by completing a written research assignment.		

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 2: Definitions of Teacher Ethics, Theories of Moral Development, and Codes of Behavior (Part 2: Group Ethics) (15 Hrs)			
Topic 2.1: The Ethical Colleague: This topic explores the relationships between teachers. It is often common to find that many schools in Cambodia are riven by conflict and jealousies between teachers and school managers. Often these conflicts concern money. Given this context, Trainees will explore the idea of what it means to be a professional educator. Besides developing engaging lessons that meet the academic needs of students, a teacher needs to exercise good judgment and interact ethically with other colleagues in a professional manner. Teachers must also be mindful that even when interacting with colleagues the foremost guiding principle is that these interactions must always be in the best interest of students and the profession. Indeed, in many countries, a teacher who sees unethical behaviors in a colleague (e.g., sexual abuse of a student) is required by law to report the behavior to the authorities. In this module, we will examine different ways that the ethical expectations of teachers can impact how they work with colleagues and how they maintain a safe, professional environment in their schools. ***Key Discussion Questions:*** 1. When teachers display behaviors driven by jealousies and unethical considerations, do you think that such teachers should remain in the teaching profession?	• **2.1a** Trainees can explain how different value sets, priorities, alternative understandings of a particular issue and other factors may result in conflict between educators. • **2.1b** Trainees can explain how conflicts between educators may result from the working culture of the school as well as from internal teacher characteristics. • **2.1c** Trainees can provide justifications for alternative views when answering specific Discussion Questions.	*The Ethical Colleague* *https://www.pspc.education.pa.gov/Promoting-Ethical-Practices-Resources/Ethics-Toolkit/Unit7/Pages/Introduction.aspx* *Teacher versus Administration* *https://www.youtube.com/watch?v=3f1rbelSq1A*	• **In-class Group Work:** Student groups will discuss two videos that they observed as part of the class and answer the following questions: 1. What is the source of the conflict? 2. Is this conflict driven by individual traits or the working environment of the school? 3. If you were the school administrator in the case studies viewed, how would you have resolved the conflicts that arose? Be sure to justify your response.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
2. Do you think that conflicts between colleagues is mainly the result of the educational setting in Cambodia or is this first and foremost a problem of how individuals have been socialized when they were young? 3. Based on the case study that you observed, how do you feel about the actions of the teacher's aide who reported a colleague? Do you believe the aide had a legal responsibility to report the misconduct? What would have happened if the aide had not reported the misconduct? To what entity or entities should the misconduct be reported? 4. Do you believe that the teacher should be disciplined either on the local level or on the state level (certification)? **Hours:** 4 Hours			
Topic 2.2: Creating an Ethical School Climate: This topic explores how teachers' behaviors in the classroom and school contribute or detract from the creation of an ethical school environment. Common teacher practices such as routinely charging students for access to the curriculum, unofficial school fees, parental payments for promotion and transfers, and other practices are examined with respect to their impact on the ethical climate within a school. Codes of professional practice in	• **2.2a** Trainees can effectively critique case studies that they read/view regarding ethical behavior and how these behaviors impact on a school's philosophical culture. • **2.2b** Trainees can explain some key	*Creating an Ethical School Climate* *https://www.pspc.education.pa.gov/Promoting-Ethical-Practices-Resources/Ethics-Toolkit/Unit8/Pages/Introduction.aspx* *Creating a Climate of Respect* *http://www.ascd.org/publications/educational-leadership/sept11/vol69/num01/Creating-*	• **In-Class Group Work:** In their groups, Trainees will create 6 rubrics that describe an ethical school environment ranging from high to low. The principles explained in the article, Creating a Climate of Respect

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Cambodia outline the ethical expectations for teachers. While it is critical for teachers to see how these expectations can impact decisions in their personal life, it is also important for teachers to identify how these expectations impact their professional lives and how they translate into their classroom cultures. ***Key Discussion Questions:*** 1. Many Cambodian teachers limit access to the curriculum by students depending on how much money they can pay. How do you think this practice impacts on students' respect for the teacher? What do such behaviors say about the school manager who allows such behaviors? What long impacts might such behavior have on students' moral development? 2. One of the case studies under this topic recounts that a teacher allowed a fight to occur in his classroom between two students. How would you feel if your son or daughter was in the classroom at the time of the fight? How would that impact the way you viewed the teacher and his effectiveness in teaching your child? 3. How did the teacher's actions in the classroom communicate his ethical position on using fighting and violence to resolve conflict? What type of classroom culture does this create in his classroom? 4. One of the articles that Trainees must read for this topic identify four measures that schools should observe to create an ethical climate in the school. How	principles that define ethical school climate and how principles could be applied to the Cambodian context. • **2.2c** Trainees can develop a continuum of rubrics defining an ethical climate in a Cambodian school.	*a-Climate-of-Respect.aspx*	should play a key role in developing these rubrics.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
feasible is it to implement these measures in a Cambodian school? **Hours:** 4 hours			
Topic 2.3: Teaching in a Diverse Society: As a nation, Cambodia is becoming more and more diverse. There is more awareness about minority groups in society and their right to be different. Indigenous groups in the North are increasingly proud of their heritage and demand respect from other Cambodians. Similarly, different religious groups in Cambodia also expect better understanding of their culture and religious customs from their peers. Many classrooms in Cambodia now reflect this diversity. Teachers now work with students representing a variety of different backgrounds, religions and traditions. In this module, we will examine teachers' ethical responsibilities for working with students from diverse backgrounds and with students who hold varying belief systems. We will also explore the potential conflicts engendered when your personal or the school's values conflict with those held by your students. ***Key Discussion Questions:*** 1. Teachers believe that they have educational freedom when developing lessons for their students. In an example provided from the United States, some	• **2.3a** Trainees can define good ethical practices that accommodate the social, ethnic, and religious differences of some of their students. • **2.3b** Trainees can develop explicit guidelines that ensure ethical treatment of students in a diverse classroom. • **2.3d** Trainees can critique case studies that describe some of the ethical challenges that teachers might encounter in a diverse classroom.	*Teaching in a Diverse Society* *https://www.pspc.education.pa.gov/Promoting-Ethical-Practices-Resources/Ethics-Toolkit/Unit5/Pages/Introduction.aspx*	• **In-class Group Work:** Student groups will develop a set of guidelines that accommodate the differences of one or more of the following groups in a classroom. For each guideline that groups create, try to provide an example that exemplifies how the guideline would be implemented. Be sure to consider one or more of the following groups that contribute to diversity in your classroom: 1. Non-Buddhists (e.g. Cham Muslims) 2. Ethnic Minorities 3. Poor students 4. Physically

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
students dressed in garb (Ku Klux Klan) that was offensive to minority students as part of a history project. What if something similar happened in a Cambodian classroom where some students dressed up in Pol Pot garb. Would it be appropriate to allow students to wear such clothing as part of a classroom assignment? 2. Should a teacher be suspended for instructional decisions that offend certain minority groups in society? 3. Should teachers in public schools accommodate the religious and cultural customs of students who are not Buddhists or ethnic Khmers? Why or Why not? **Hours:** 4 Hours			challenged students 5. LGBT students
Topic 2.4: The Impact of Traditional School Culture in Cambodia on the Instruction of Morals and Civics Discussions under this topic focus on the contradiction between the policy of teaching civics and morals as part of the official curriculum and the actual behavior of teachers. The ministry's philosophy on civics and moral education are set out in the document, "Policy for Curriculum Development 2005-2009,' which focuses heavily on respecting human rights. However, the pervasiveness of immoral behaviors by teachers and school managers (e.g., extorting money from students, corporal punishment, etc.) undermines the ability of the education system to help students internalize the values that the policy seeks to	• **2.4a** Trainees can describe the factors in Cambodian culture (e.g., patronage networks, conformity, hierarchy, etc.) that undermine the instruction of morals and civics. • **2.4b** Trainees can make assessments about the degree to which the instruction	*Policy for Curriculum Development, 2005-09 (MoEYS)* *Two Views of Education: Promoting Civic and Moral Values in Cambodian Schools* https://www.researchgate.net/publication/223322785_Two_views_of_education_Promoting_civic_and_moral_values_in_Cambodia_schools	• **In-class Group Work:** Student groups will identify a list of measures that could be taken to improve the credibility of Moral and Civics Teachers. At least 5 measures should be identified by each group. For each measure, Trainees should also assess the feasibility of each

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
promote. Discussions will focus on exploring the tensions between the Morals Curriculum and the traditional school culture in many schools as well as how this tension can be defused. *Key Discussion Questions:* 1. How credible do you think teachers of morality and civics are with their students in Cambodia? 2. What other practices besides 'collecting money from students' do you think affects the credibility of teachers and administrators? 3. What measures could be taken to increase the credibility of morals and civics instruction? Do you think that these measures are feasible? **Hours:** 2 Hours	of morals and civics is undermined by unprofessional teacher behaviors. • **2.4c** Trainees can identify measures to improve the credibility of Morals and Civics instruction in Cambodian schools and determine the feasibility of their measures.		measure on a scale of 1 to 5.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 3: Ethics for Educational Leaders and Managers: In this module, Trainees will learn about the duties of those who work in a school. This is meant to help Trainees find their place in the school system. It also prepares them to expand their responsibilities at the school in the future. **(15 Hours)**			
Topic 3.1: Working Together as a Team: In this module, trainees will learn about the roles of different stakeholders in a school and who among these stakeholders teachers should consult if they have to solve certain common problems. Stakeholders in this regard include not only school personnel, but also development partners who are assisting the MoEYS to implement NGS reforms. *Key Discussion Questions* 1. Who should one address if one has administrative problems in carrying out one's teaching duties (e.g., classroom is in disrepair, electricity does not work, library is rarely open, labs have no supplies, etc.)? 2. Who should one talk to, if one has questions about teaching techniques? Identify all of the possible persons that may be consulted in order of their priority. 3. If a teacher needs supplies for teaching, to whom should they make a request? 4. Who is responsible for the safety of students? 5. Who is entitled to make important decisions about discipline in the classroom and in the school in general? 6. When should a teacher discuss difficult issues relating	• **3.1.a** Trainees can explain the organization of a New Generation School in terms of the responsibilities of key stakeholders (e.g., school managers, administrative staff, librarians, development partners, etc.). • **3.1.b** Trainees can identify the right person to help them solve daily problems that a teacher might encounter during the course of a school day.	Richard E. Lange - *A Life Saver for New Teachers_ Mentoring Case Studies to Navigate the Initial Years* (2011, R&L Education) These case studies can be useful to design the lesson, but the answers are made for American schools and must therefore be adapted to a Cambodian context.	• **Written assignment, individually**: Trainees find solutions to a series of practical problems, including talking to the right person. • **The entire class discuss** about the feasibility and opportunity of those solutions.

37

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
to a student's learning with his/her family? 7. Should teachers be held accountable for the learning of their students? If yes, to whom should they be accountable and why? **Hours:** 4 Hours			
Topic 3.2: Meaningful Delegation: Achieving a balance between the Needs for Teacher Autonomy and Classroom Monitoring: As they try to increase quality of teaching, institutions such as schools, provinces or ministries produce a lot of norms and regulation. Eventually, those norms become a problem by themselves and do more harm than good, because they deprive common workers of the freedom that is necessary to accomplish their missions. In this topic, we will analyze the concept of subsidiarity and the process of decision-making in institutions. The main question is: who should be in charge? *Key Discussion Questions:* 1. Is it normal that a school director "corrects" the school reports written by teachers? 2. Can an inspector tell a teacher that his teaching methods are bad in front of the students? 3. Who should choose reading activities? 4. Who should design curricula?	• **3.2.a** Trainees can explain the principle of subsidiarity and how it is applied in a school environment. • **3.2.b** Trainees can identify the respective responsibilities of teachers, school directors and other leaders in the chain of command. • **3.2.c** Trainees can establish links between power and responsibility and precise how they differ.	*https://www.youtube.com/watch?v=GD0moAiq22k* *https://catholicmoraltheology.com/subsidiarity-is-a-two-sided-coin/* *https://acton.org/pub/religion-liberty/volume-6-number-4/principle-subsidiarity* *http://www.europarl.europa.eu/ftu/pdf/en/FTU_1.2.2.pdf* *https://campusrecmag.com/decentralized-command/* *https://smallbusiness.chron.com/advantages-decentralized-organizational-structure-603.html* *https://smallbusiness.chron.com/centralized-vs-decentralized-organizational-structure-2785.html*	• *Written assignment,* **individually:** Trainees find out different sorts of decisions that are to be made in the Cambodian school system and explain which hierarchical levels are most suited to take those responsibilities. • Trainees will compare their answers and discuss to reach a consensus.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Hours: 2 Hours			
Topic 3.3: Practical Organization as a Means to Improve Management Efficiency: One of the most important factors that affect work efficiency in Cambodia is a lack of organization and punctuality. It is common for teachers and students to come late to school or to delay the preparation of major events. Too often, good ideas are wasted because workers rush when they have to apply them. In this topic, Trainees will learn how to use various resources, including software and checklists to increase their efficiency and organize collective work. *Key Discussion questions:* 1. How do we have things done in time? 2. What to do when people don't do their assignment or are late? 3. What must I do if I think I won't be able to do my work on time? 4. What should we do, if we have to cancel an activity? 5. How can we better plan maintenance operations? 6. Who is in charge? **Hours:** 4 Hours	• **3.3.a** Trainees can prepare schedules for extra-curriculum activities such as parent night shows, cleaning operations, or staff meetings. • **3.3.b** Trainees can evaluate their own working capacity, based on concrete sets of criteria. • **3.3.c** Trainees can delegate tasks by writing precise instructions, as needed. • **3.3d:** Trainees can develop useful checklists that will facilitate their daily and weekly planning.	Atul Gawande; *The Checklist Manifesto,* especially chapter 6 (suggested reading) *Checklist for checklists* of the same author	• Trainees plan out their own work and those of others using commonly employed software for the purpose. Such planning should include the use of 'reminders.' • Using the *Checklist for checklists*, trainees design a checklist for important tasks they are likely to forget.
Topic 3.4: Security & Well-Being of Students: In this module, trainees will learn the basic rules regarding health and safety of children. They also consider the responsibility of teachers regarding those issues and the	• **3.4.a** Trainees can explain their responsibilities as educators and	Portals to many links on specific issues: *https://medlineplus.gov/schoolhealth.html*	• **Project work:** Trainees work together in small groups to determine possible

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
actions they have to take in case of emergency. ***Key Discussion Questions:*** 1. Addictions and risky behaviors 2. Education to health on a daily basis: what is the responsibility of the ordinary adults in the school? 3. The questions of the adolescents, how to answer them? What can school staff members do regarding to sexual and emotional education? Where is the limit? 4. How to act in case of emergency? 5. Disease prevention and hygiene. 6. When can an educator intervene himself? When should he rely on a specialist? **Hours**: 6 Hours	caretakers, as this relates to children's health and well-being. • **3.4.b** Trainees can identify possible responses to emergencies or other events that threaten the health and well-being of a student.	*https://noys.org/* *https://www.cdc.gov/Features/SafeSchools/* ***Note:*** *These are standards for American schools. Care should be taken to adapt these readings to the Cambodian context, considering specifically the availability of professional health facilities.*	accidents or issues that could arise at the school (as these relate to Child Protection) and identify possible responses that can be taken to address them. Groups may share in plenary and discuss the ideas that are presented. An example of a possible matrix to complete is provided below: **Issue that May Arise** — **Responses** 1. A child is injured while at school — ??? 2. A child gets into a fight at school — ??? 3. ??? • **Examples of topics:** learning disabilities, epidemy of children diseases, prevention of sexually transmitted diseases, hygiene,

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
			nutrition etc.
Topic 3.5: Moral Education and the Value of Setting an Example: Teachers are not only academic professionals. They are also adults that children can imitate for better or worse. Therefore, it is essential that they are aware of their behaviors that can influence the moral development of children. Trainees will discuss the role that 'moderation' plays in the idea of 'good living' and how this concept can be very useful in responsibly governing such behaviors as drinking alcohol, having sexual relations with others, etc. The same goes for other adults in the school environment as well. ***Key Discussion Questions:*** 1. Should the same rules be applied to students and teachers? If not, what justifies the differences? 2. Should the same rules be applied inside and outside the school? If not, where is the limit? 3. Should moral education be 'explicit' or 'implicit? Should it be both? What are the reasons for your choice? 4. Is it effective to lecture students about bad behavior? If so, what are the conditions under which such instruction could be effective? **Hours:** 4 Hours	• **3.5.a** Trainees can adjust their behavior to match social expectations as role models for children. • **3.5.b** Trainees can explain clearly (even to children) the respective rights and duties of children and adults. • **3.5.c** Trainees can explain the effects of teachers' behavior on their own reputation, the efficiency of their teaching and the moral development of children, in both civil and school context.	Todd Howard - Drug Education Library_ *Heroin (2002, Lucent Books),* The chapter 5, *Preventing Heroin Abuse*, compares different historical approaches in drug education and why too many programs failed. Good case study. *[12 Rules for Life - An Antidote to Chaos* by Jordan B. Peterson, chapter 11, to understand motivations behind dangerous behaviors.]	• ***In-class Debate:*** The facilitator may organize the class into two groups to debate opposing views on this topic. Some of the possible topics to discuss could include the following: ***Topic 1:*** Moderation vs. Abstinence: Which is Better? ***Topic 2:*** Morally doubtful practices such as gambling, smoking, drinking or prostitution are not behaviors that teachers want to show their pupils. How, when, where, and under which conditions might a teacher engage in such practices, if at all?
Topic 3.6: Animating a Team of Teachers (Same Subject or Interdisciplinary): This topic seeks to prepare individuals to be effective Team Leaders. The goal is to	• **3.6a:** Trainees can identify useful strategies that lead to	*Soft-Skills,* Manmohan Joshi, chapter 5 and 6 (Team-building and Leadership)	• **Group Work:** In small groups, trainees will examine case studies

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
help such individuals provide leadership to their colleagues for purposes of self-development. Teachers often have to work together as a team either on a regular basis or for specific projects. Such working groups may not have a rigid hierarchical structure. These teams may comprise teachers of the same subject, as well as teachers with various skills and backgrounds. This topic will help trainees explore the need for effective coordination focusing on: - Appropriate use of Terminology - Preparation of exams and mock exams - Extra-curricular activities - Special educational programs (such as reading programs, contests and so on) - Teacher Training and Classroom Preparation Trainees will also learn about how to conduct meetings in a way that maximizes involvement from all participants. ***Key Discussion Questions:*** 1. What do you think is the optimum number of teachers in a working group meeting? What do you base your assessment on? 2. Why is teamwork important? 3. Which tasks may require the presence of all members? Which tasks are best done individually? 4. What strategies can a team leader use to ensure that everyone at the meeting has an opportunity to express his or her views?	optimum effectiveness of a team. - **3.6b:** Trainees can identify ameliorative strategies to improve teamwork based on an assessment of case studies that exemplify weak teamwork. - **3.6c:** Trainees can organize meetings among themselves that exemplify the principles for optimum teamwork.		that describe weak examples of teamwork. After analyzing the case studies, they will determine the problems that lead to ineffective team interaction and ameliorative strategies that address the deficiencies that were identified. Each group should present their assessments to the large group for discussion.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
5. What strategies can a team leader use to discover teachers' greatest concerns and difficulties? 6. There is sometimes a tension between keeping a discussion wide-open while at the same time keeping it on track and relevant to the agenda. How does one reach a balance between these two tensions? 7. How do we inform stakeholders who are not part of the meetings about important decisions and outcomes? **Hours:** 4 Hours			

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 4: Valuing the Individual Student: Issues relating to Labeling, Differential Needs, & Student Classification (15 Hours)			
Topic 4.1: The Ethics of Ability Groupings and Student Tracking: Before the 1970s, students in most countries were routinely grouped and tracked for educational purposes. Discussions under this topic recount why these practices began to recede after the 1970s but in the last ten years are now experiencing a resurgence. These trends are of great relevance in Cambodia where children are routinely ranked in terms of their performance every month. There are many questions about the ethics of such practices and how they affect children's self-confidence and attitudes towards school. Under this topic, Trainees will also explore such key concepts as 'self-fulfilling prophecy,' 'halo effect,' and 'stigma' and the role that these play in affecting teachers' expectations about students' performance.

Key Discussion Questions:

1. How do you feel about the practice of ranking children in Cambodian classrooms from a very early age? What effects do you think that this has on children as they develop? How might these effects be different for different students?
2. Many critics of grouping and tracking argue that such practices are discriminatory in terms of race and class? Are such arguments relevant in Cambodia? Are there any social groups that might be negatively | • **4.1a** Trainees can explain the meaning of key terms relating to ability grouping and tracking as these relate to the Cambodian context.
• **4.1b** Trainees can explain the merits and demerits of grouping and tracking in an educational context.
• **4.1c** Trainees can make a case for both discontinuing the practice of ranking and not ranking Trainees in Cambodian classrooms | *Ability Grouping, Tracking, and How Schools Work*

https://www.brookings.edu/research/ability-grouping-tracking-and-how-schools-work/

The Resurgence of Ability Grouping and Persistence of Tracking

https://www.brookings.edu/research/the-resurgence-of-ability-grouping-and-persistence-of-tracking/ | • **Writing Assignment:** Write a short report on your own personal experiences with 'performance classification' in Cambodia and whether you think this practice is justified or not. Your report should be 3 to 5 pages long. |

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
affected by such practices? 3. If grouping and tracking were not used in Cambodian classrooms, do you see any other methodological alternatives to help students with different needs? **Hours:** 4 Hours			
Topic 4.2: The Bell Curve and the Roots of Inequality in the Classroom: In this topic, Trainees will explore the origins of the 'bell curve' and how it has become one of the key tools employed by educators for sorting students by ability grouping. One of the key arguments for justifying the use of the bell curve is that it reflects the normal distribution of things in the natural world. This belief belies the observation by Sir Francis Galton that the offspring of individuals who lie at the extreme tails of a curve often lie closer to the center of the curve, i.e., the mean. After reviewing the origins of the bell curve, Trainees will discuss an opposing view that using the bell curve as the basis for evaluation in a school ensures that someone always has to fail. The students who tend to fail most often frequently come from members of the lower social classes. Thus, many opponents of the use of the bell curve in schools argue that schools have become institutions that perpetuate social inequalities in the broader society. As such, the use of the bell curve seems to be an 'unethical' practice. Trainees will explore the merits and demerits of both	• **4.2a:** Trainees can explain the origins of the bell curve. • **4.2b:** Trainees can form conclusions about the ethics of using bell curve distributions in sorting students by ability level. • **4.2c:** Trainees can determine how bell curve practices are reflected in Cambodia and the degree to which these practices promote inequality both in the classroom and in society in general.	*The History of the Bell Curve: Sorting and the Idea of Normal* *http://fendler.wiki.educ.msu.edu/file/view/ 2008+Bell+Curve.pdf*	• **In-class Debate:** Trainees will form into two groups of two or three persons. Each group will take an opposing view as follows: *The Bell Curve is an ethical practice that does not promote inequality in schools.* *The Bell Curve is an unethical practice that promotes inequality in schools.* • Both groups must then argue the merits of their position to the remaining members of the seminar. Trainees should research their arguments the night

45

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
arguments described above and seek to form their own conclusions about the ethics of using the bell curve as a means to evaluate students. ***Key Discussion Questions*** 1. Do you believe that the bell curve reflects the natural order of things both in the classroom and society in general? How do you justify your answer? 2. The bell curve and the practice of ranking Cambodian students from top to bottom on a monthly basis are strongly related. Under this evaluative system, someone always has to be on top and someone always has to be on the bottom. Do you think that such practices in Cambodia promote inequality? 3. Do you believe that someone in a class always has to fail? Is it possible for everyone in a class to pass? Please explain your answers. **Hours:** 4 Hours			before so that they are well prepared. • At the end of the debate, the remaining seminar members will indicate which side seemed to have the best arguments.
Topic 4.3: Alternative Approaches for Addressing Differential Abilities Among Children: During the last two or three decades when the practice of ability groupings became less popular, a number of new approaches to replace the practice of ability groupings arose to fill a void. Under this topic, Trainees will explore	• **4.3a:** Trainees can explain the key tenets of (i) Master Learning; (ii) Cooperative Learning; and (iii) Differentiated	*'Mastery Learning' by Lorin Anderson and James Block (to be distributed to Trainees)* *Cooperative Learning: Theory & Practice* http://www.kapekh.org/files/report_file/38-en.pdf	• **In-Class Group Work:** The seminar will break into three groups. Each group must research a particular educational approach that opposes

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
three of these approaches including (i) Mastery Learning; (ii) Cooperative Learning; and (iii) Differentiated Instruction. These approaches came into wide-spread use in the 1980s and 1990s and remain popular today. In this respect, Mastery Learning is distinguished by its belief that teachers can formulate their teaching in a way so that students do not cluster in the middle of a distribution but rather cluster at its higher end. Cooperative Learning focuses on the idea of heterogeneous ability groupings and the philosophy of altruism that this implies while Differentiated Instruction focuses on the need for teachers to understand the needs, interests, and learning styles of their students and modulate their instruction accordingly. Each of these educational approaches will be examined in light of their focus to promote morality, equality, and respect for individual differences as well as their ability to address the challenges posed by pre-requisite knowledge as children progress through the curriculum, especially in subjects such as mathematics and science. ***Key Discussion Questions*** 1. Do you think that the idea of promoting social equity in learning achievement is practical? 2. How effectively do you think that each of the approaches described under this topic promote both learning and principles of equality. Do they promote equality at the expense of learning achievement? Explain your answers.	Instruction, especially as these pertain to their ethical characteristics to promote equality and morality in the classroom. • **4.3b:** Trainees can make presentations that explain the key components of target approaches and how they promote equality in the classroom. • **4.3c:** Trainees can explain how targeted approaches address ethical concerns stemming from the practice of grouping students by ability level.	*Differentiated Instruction: What you need to know* *https://en.wikipedia.org/wiki/Differentiated_instruction* *Differentiated Instruction (Wikipedia)* *https://www.understood.org/en/learning-attention-issues/treatments-approaches/educational-strategies/differentiated-instruction-what-you-need-to-know*	the idea that some students must always fail or that grouping students on the basis of their ability is an ethical educational practice. Each group will then make a PowerPoint, which will be presented to the rest of the class. The three approaches to be researched include: 1. Mastery Learning 2. Cooperative Learning **3.** Differentiated Instruction

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
3. Do you have any preference for any one of the three educational approaches discussed in this topic. If so, explain why you have this preference? **Hours:** 6 Hours			
Topic 4.4: Automatic Promotion as a Means to 'Value' the Student – Theory & Actual Practice: The use of Automatic Promotion is widely used in many countries to avoid the stigmatization of children, particularly as they get older and are more aware of how others perceive them. Yet, the practice is also roundly criticized because it undermines accountability in school systems. With this background in mind, Trainees will explore the nature of promotion decisions in Cambodia, which largely reflect *de facto* automatic promotion and the ethics of promoting students to the next grade when they have not achieved mastery of the curriculum and receive no remedial support after they are promoted. Many organizations are now reporting that some students in junior high school are unable to read. Trainees will also examine whether automatic promotion as it is practiced in Cambodia is achieving its 'moral' objective of avoiding stigmatization or whether it has simply undermined accountability even further in a system that already has hardly any accountability for teachers or school directors. *Key Discussion Questions* 1. Do you know of anyone who has repeated a grade? If yes, how did the experience of repeating a grade affect	• **4.4a:** Trainees can explain the merits and demerits of automatic promotion. • **4.4b:** Trainees can assess the ethics of both grade repetition and automatic promotion based on a set of moral standards that they create. • **4.4c:** Trainees can write a short paper recommending either the continuation or discontinuation of automatic promotion practices in Cambodia using ethical principles as the basis of their recommendations.	*Student Repetition in Cambodia: Causes, Consequences, and Its Effect on Learning (pp. 15 to 21)* http://www.kapekh.org/files/report_file/1-Student-Repetition-In-Cambodia.pdf	• **Written Assignment:** Trainees must write a short two or three-page statement of recommendations regarding the continuation or discontinuation of automatic promotion practices in Cambodia. The report that they write should have the following sections: **Section 1:** Background **Section 2:** Statement of Ethical Principles as the Basis for the Recommendations **Section 3:** Specific Recommendations

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
him or her? Would automatic promotion have led to a better academic result? 2. Based on your review of the literature, do you support the use of automatic promotion as a more ethical alterative to grade repetition? 3. Are there any conditions under which you might consider the use of automatic promotion and if so, what are these conditions? **Hours:** 4 Hours			
Topic 4.5: Using the Theory of Multiple Intelligences as a Means to Value the Potential of All Students: Defining intelligence has been a major challenge for psycho-metricians for decades. Traditionally, intelligence has been defined as a single entity that can be measured through an Intelligence Test that yields an IQ score. Most school systems develop tests that focus heavily on students' ability to demonstrate linguistic and logical-mathematical skills. Many students with other skills often do not do well on these tests. There are many examples of the poor predictive validity of these tests to forecast how well many individuals actually perform in life. Albert Einstein and Jack Ma are but two examples of individuals who have done poorly on traditional tests but who have gone on to become the most famous men of their generation. Thus, traditional thinking about how to measure 'intelligence' leads many education systems to undervalue many individuals who may not have strong linguistic or mathematical intelligence but who may nevertheless have other forms of intelligence. One wonders what happens to	• **4.5a:** Trainees can describe the key tenets of the Theory of Multiple Intelligences as well as the 7 Intelligences themselves. • **4.5b:** Trainees can determine the implications of adopting the Theory of Multiple Intelligences in Cambodian schools and in particular how Cambodian teachers evaluate students. • **4.5c** Trainees can express an opinion about the feasibility of	*Howard Gardener, Multiple Intelligences and Education* *http://infed.org/mobi/howard-gardner-multiple-intelligences-and-education/* *Growing up, . . .(a short video on undervaluing a child)* *https://www.facebook.com/JayShettyIW/videos/1888559508119084/?hc_ref=ARTiY6tMYUWPeclaYQelbet9fZn6KRAXW8i11zSJAB1iHeEbE2rOyj93OFC2gMYlveM&__xts__[0]=68.ARAA1Fnk5QSxBtJIlAAPkOCTbEvamumgTE1nAZk9mUfvymj5bAg-eOa5mylOs60PrtYNhDNRXb2vsU6UEgsbgLUkHtWX1za-M4AZ9MUsNvAYiO5QNP6QbOheU7Ge-lDPFcBySAgLLxSVMehHRtA15PafYjpmeJTsquscxQbHi4OB7uHnPus61ElYrLP57Jwgd1i8UGyRdMv1912jKAmN5Q&__tn__=FC-RH-R*	• **In-Class Group Work:** In small groups, Trainees should identify some concrete recommendations about what changes would need to be made in Cambodia's curriculum and assessment system to better value the potential of individual students.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
all the students who fail the Bac II Examination, which is a traditional measure of academic excellence. Under this topic, Trainees will explore *the Theory of Multiple Intelligences* developed by Howard Gardener. This theory advocates for a more expansive definition of intelligence and the modulation of the way schools teach to accommodate different intelligences. Trainees will explore the validity of this theory, its implications for teaching and assessment in Cambodia, and how feasible it would be to change the organization of curricula and tests such as the Bac II Examination to accommodate it. ***Key Questions for Discussion*** 1. Do you know of any people who did poorly on the Bac II Examination but who later went on to become very successful people? Why do you think that this is a paradox? 2. When national tests undervalue the human resource potential in a society, what implications do you think this might have for economic and social development of a country? 3. Do you think it would be possible to adopt the philosophy underlying the Theory of Multiple Intelligences in Cambodia? 4. What changes would you have to make in Cambodia's education system to accommodate the Theory of Multiple Intelligences? How feasible do you think it would be to adopt these changes?	adopting the principles of multiple intelligences in Cambodian schools.		

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Hours: 2 Hours			
Module 5: Authority in the Classroom (15 Hours)			
Topic 5.1: Factors Affecting a Teacher's Authority in the Classroom This topic will start with a reading on a famous experiment by Stanley Milgram in which he identifies two behavioral states that can help explain how a person reacts to authority. These states are known as 'autonomous' and 'agentic' states. Following from a better understanding of these concepts, trainees will further explore the parameters of a teacher's authority and what the limits of this authority should be. The instructor will explore some of the main facets of authority, including the power bestowed upon a teacher by an institution (i.e., the school), how a teacher's observed competence and charisma may affect his/her authority, and the degree to which a teacher's own behavior may affect his/her authority. Trainees will then determine how these components relate to school organization and teaching practices. *Key Discussion Questions* 1. Stanley Milgram identified two states of behavior as a result of his experiments on 'authority and obedience'. These include the 'autonomous' state and the 'agentic' state. Because young children and youth are particularly impressionable so early in life, which	• **5.1a:** Trainees can effectively explain the meaning of 'autonomous' and 'agentic' behavioral states as these relate to the exercise of authority. • **5.1b:** Trainees can express an opinion that explains what the limits of a teacher's authority should be based on justifications that are both logical and reasonable. • **5.1c:** Based on a thorough understanding of the concepts discussed, Trainees can write a short essay explaining how a teacher can maximize his or her authority in the classroom without	Stanley Milgram, *Obedience to Authority: An Experimental View,* abstracts https://simplypsychology.org/milgram.html	• **Individual Assignment:** Each student should write a short essay of about 1 to 2 pages that explains how a teacher can maximize the authority of a teacher WITHOUT excessive resort to fear or intimidation.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
behavioral state do you think teachers should seek to promote in the classroom? Be prepared to justify your answer. 2. In your opinion, what are the general parameters of a teacher's authority in the classroom and what should the limits of this authority be? 3. Do you have a teacher that you respected more than any others? Why did you respect that teacher and what did other classmates share your opinion? Why or why not? 4. What role does a teacher's personal qualities play in the way that he or she may exercise authority? What kinds of personal qualities enhance a teacher's authority and which ones detract from that authority? Explain why you think so. 5. What are the similarities and differences between authority in the classroom and other contexts where authority is important (e.g., an office, a clinic, a business, etc.)? **Hours:** 2 hours	excessive resort to fear or intimidation.		
Topic 5.2: Deterrence, A Dangerous Concept. This topic will address the common prejudice that students should be afraid of the teacher to behave. By reading several authors on law enforcement, Trainees will understand why this prejudice is so strong and what negative outcomes may result from it. Finally, Trainees determine key factors that will help them make effective	• **5.2a:** Trainees can relate different behaviors to incentives. • **5.2b:** Trainees can demonstrate that can understand people with another mindset.	Cesare Beccaria: an abstract from *On crime and punishment* (about death penalty for major and minor offenses) Short Excerpts from: *The Prince* by Nicola Machiavelli (about being feared or loved)	• **Individual assignment:** Using the key factors discovered during the course, Trainees produce case studies about various mischiefs

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
decisions to confront anti-social behaviors including: 1. Proportionality 2. Consistency 3. Quick response 4. Hope 5. Confidence toward the authority 6. Act before you have to punish, punish before you get angry and lose control. ***Key Discussion Questions:*** 1. Is a zero-tolerance policy for corporal punishment possible or even desirable? 2. What made you accept a punishment when you were a child? 3. Why did you or your classmates reject the decision of an adult when you were a small child? 4. How does fear affect cognitive abilities? **Hours:** 2 hours	• **5.2c:** Trainees can identify the consequences of punishments or the lack of them on the long run, in both negative and positive way.	Jordan B. Peterson's book, the *12 Rules For Life*: **Do not let your children do anything that makes you dislike them**.	they've encountered during their career and the best way to address them.
Topic 5.3: School Regulations & Standard Routines In this topic, Trainees will review the official and unofficial actions (both positive and punitive) that schools use to maintain discipline. There will be a discussion about the merits and demerits of positive and punitive measures, as well as which measures may not be 'moral' in an educational setting. This discussion will occur in the context of how teachers can use institutional resources to improve their position as a teacher to maintain discipline in the classroom. Trainees will be expected to relate their own actions to those of other educators, including school	• **5.3a:** Trainees can explain the merits and demerits of positive and punitive discipline. • **5.3b:** Trainees can identify common measures to maintain discipline in Cambodian schools and assess their effectiveness.	***Rethinking School Discipline*** *http://www.championsofunity.org/education-resources/research-and-policy-outlook/rethinking-school-discipline* ***The Positive Discipline School*** *https://positivediscipline.org/resources/Documents/PDSbrchr-8-06.pdf* *Examples of school regulations in Cambodia*	• **Group discussion:** Trainees define the most important rules that should be included in a school regulation. They justify their choice in terms of morality, practicality and pedagogy.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
managers, other teachers, parents, and others. ***Key Discussion Questions:*** • What are some of the most common types of punishment used in schools where you have ever worked? • Were these measures effective? If not, why? • What kinds of decisions do you think the teacher is entitled to make with regards to punishing students? • If you are having persistent problems with a particular student, whom should you consult for additional guidance? • What should one do if several members of a school's staff disagree about the appropriate measures to take in the case of a particular student? ***Hours:*** 2 hours	• **5.3c:** Trainees can analyze a working environment in terms disciplinary measures in order to adjust their expectations of discipline to the possibilities. • **5.3d:** Trainees can Identify key elements in school regulation that facilitate or worsen teacher's work in the classroom.		
Topic 5.4: Common Routines & Procedures in the Classroom By watching and analyzing classroom routines (e.g. classroom greetings) in various countries and schools, the Trainees will find new ideas through which to organize the class and be aware of the most common difficulties that can arise in a school environment. ***Key Discussion Questions:*** 1. What does the teacher try to achieve with classroom routines? 2. Do such routines work in a Cambodian primary	• **5.4a:** Trainees can develop set of routines to address the most common behavioral issues in the classroom (e.g., maintaining order). • **5.4b:** Trainees can explain the purpose of school routines. • **5.4c:** Trainees can design their own	*Videos on school rituals around the world (downloaded in the e-library).*	• ***Group Discussion:*** The Trainees describe a routine of their own to solve a given problem (such as a very talkative class). • Trainees then analyze the purpose of a routine proposed by someone else.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
school? In a high school? 3. What can make the observance classroom routines fail or succeed? 4. Would it make the children happier, more obedient or more efficient? 5. What is the practical utility of classroom routines? 6. What is its moral advantage, if any? 7. What makes a good routine? 8. What routines have you experienced before? What was their purpose? **Hours:** 2 hours	classroom routines if need be.		
Topic 5.5: Practical Exercises, Voice, & Body Language Role-Playing Game: Trainees are required to perform simple teaching tasks, such as launching an exercise or telling a story, and to deal with "unexpected" events. Those events are planned by the instructor with the help of other Trainees, of course. Feedback is provided to the actors. Trainees also learn how to organize the classroom according to their teaching objectives and style. Trainees will further learn how to prepare the students for different activities and how to monitor them (with special attention to blind spots, weak students and security). *Key Discussion Questions:* 1. How would you deal with the following situations that may arise in the classroom? What sorts of disciplinary	• **5.5a:** Trainees can control their voice and body language in order to increase their confidence and authority. • **5.5b:** Trainees can employ different strategies to solve specific problems that might occur in the classroom and reduce coercion and disorder.	*https://www.edx.org/course/understanding-classroom-interaction-pennx-uci1x-0*	• **Role-play:** Trainees perform various classroom interactions, with incidents planned by the instructor. During the performance a few trainees serve as observers for their classmates. They note and comment the reactions.

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measures would you employ that would be both ethical and appropriate to the infraction? • Students take advantage of the teacher's position to play. • Students wait for instructions before they perform even the simplest task. • 2 students have an argument in front of everybody. • A student comes late. • A student is sick and doesn't do anything. • A student knows better than the teacher himself. • A student disagrees with the content of the lesson and defends disturbing ideas (hate speech or the like). • The entire class is chatting. • A student from another class enters the classroom to take some material (no greetings, no permission asked). • A student protests that the punishment he/she received is unfair. Several others support him. **Hours:** 6 hours			
Topic 5.6: Case Studies, Awkward Situations In this topic, Trainees analyze difficult situations that require actions from the teacher, including some dangerous ones that cannot be simulated. Trainees discuss	• **5.6a:** Trainees can explain why certain problems in the classroom may be more complex than expected.	*Dr. Carolyn M. Orange - 25 Biggest Mistakes Teachers Make and How to Avoid Them,* Second Edition (2008) *Note:* This reading includes many interesting case studies regarding to discipline. The	• **Written Assignment:** A final case study will serve as an assessment. Trainees are required to argue a particular

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
in small groups to find a solution to each case. (In fact, some of them requires further investigation). ***Key Discussion Questions:*** 1. Case #1: a fight between two boys. There is a crowd in the courtyard. M. is bleeding. A. is still holding a stone. 2. Case #2: F and T have made similar mistakes at the test. 3. Case #3: The class has become noisy, after a bad joke, involving one student. 4. Case #4: D. is playing with his smartphone. The teacher wants to confiscate it. D. refuses to comply to the teacher's orders. 5. Case #5: S. has done his homework very poorly. As a punishment the teacher hit him. After that incident, S. refuses to talk to the teacher and to greet him. 6. Case #6: Most of the students have failed to pass a test. The teacher shouts at them and decides to punish those who have had the worst grades. 7. Case #7: A student has insulted another teacher. The teacher has burst into tears. But neither the teacher nor the school staff has taken action yet. 8. Case #8: D and S were playing marbles. D. complains that S. has stolen his marbles, while the later claims to have earned them in a fair game. 9. Case #9: P. is drunk after lunchtime. As a result, he isn't paying attention to the lesson. After a few remarks from the teacher he begins to insult different people violently.	• **5.6b:** Trainees can identify several solutions to a single problem. • **5.6c:** Trainees can explain their choices and the decision process. • **5.6d:** Trainees can draw links between their decisions and the principles exposed during the previous lessons.	solutions proposed by the author are sometimes a little bit too simplistic, and make teachers feel unnecessarily guilty, but they are excellent for triggering reflection.	case in writing. The quality of the arguments is more important than the answer itself.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Hours: 4 hours			
Module 6: Mentoring as a Teacher Development Approach (Part 1: Theoretical Considerations) (15 Hours)			
Topic 6.1 Mentoring as an Approach to Changing Teaching Behaviors: When studying this topic, Trainees will learn about the philosophical foundations of mentoring as a technique to help teachers improve their practice. In this respect, it is routinely understood that teaching is about passing on knowledge to one's students. But it is also about changing behaviors to help students live effectively in society. Learning implies the risk of being intellectually challenged, which can be threatening to many people. So the challenge for a mentor becomes how one changes people's behaviors without making them feel too threatened. Being trained as a teacher implies the risk of changing one's habits. Studies have shown (e.g., Joyce & Shower) that new teaching practices are difficult to implement, *even* when teachers are willing to do so. Empirical research suggests that teachers must practice a technique at least 20 times before it is internalized. Therefore, some kind of follow-up is required, to address the main difficulties encountered during the implementation itself. This is the mission of a mentor. This topic will, therefore, seek to demonstrate how mentoring is a critical step in ensuring that ideas presented in workshops are adopted in the classroom. *Key Discussion Questions:*	• **6.1.a**: Trainees can explain why many people resist change in terms of the concepts of fear and safety. • **6.1b:** Trainees can explain some techniques suggested in their readings about how to change people's behaviors. • **6.1c:** Trainees can evaluate the strengths and weaknesses of techniques for changing behavior (e.g., creating intellectually challenging learning environments, unsafe environments, etc.) and whether they agree with the effectiveness of these techniques or not. • **6.1d:** Trainees can	*Videos for Discussion*: *As a starter: Jordan Peterson on education and safe spaces.* *https://www.youtube.com/watch?v=qim0 W-_pkRQ* *If you don't like Peterson, Obama:* *https://www.youtube.com/watch?v=iIqTgG sl9YM)* *Can a Mentor also be your Supervisor?* *https://www.youtube.com/watch?v=9ChK3 TbF9Ug&frags=pl%2Cwn* *and* *https://www.youtube.com/watch?v=vfTRb YhKCOo&frags=pl%2Cwn* Additional Readings: Joyce and Shower, *Student Achievement Through Staff Development*, especially chapter 6 and the "levels of transfer" p102. *Also Chapter 5* Designing Training and Peer Coaching: Our Needs for Learning (difficult chapter)	• **Small Group Work:** In small groups, with the description of teaching approaches, Trainees write down the difficulties that could prevent a teacher from implementing them. They then summarize what kind of support mentors would need to provide in order to overcome these difficulties. • **Written Assignment:** Each student in the class should take a position about whether a mentor can also be a supervisor and vice versa. In less than two pages, they should be able to make a logical case one way or a another and be ready to present their

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
1. In the two videos that you watched, what do you understand to be some of the most important ways that educators can use to change students' behaviors (e.g., exposure to uncomfortable ideas, creating non-safe places, etc.)? Do you agree with these ideas? Why or why not? 2. How have you been able to change your own behavior? Give some concrete examples of how you changed your behavior? 3. Should the imitation of a new teaching model be the sole purpose of change? Why or why not? 4. How can one make sure that changes in teaching practice that we observe in a teacher are both real and relevant? 5. Do you think a mentor can be a supervisor or vice versa? Why or why not? 6. How can mentors effectively facilitate implementation of new techniques learned during workshops? **Hours:** 4 hours (Classroom-based) **Hours:** 3 Hours (Linked to ICT in Education Stream, e.g., Observic)	express an opinion about whether a supervisor can also be a mentor. • **6.1e:** Trainees can identify the major obstacles that may occur that prevent the adoption of new teaching techniques by teachers.		viewpoint to the class.
Topic 6.2. Mentoring versus Inspection: School Inspectors have long cast a dark shadow on the way in which teacher supervision has been carried out in Cambodia. Contrary to what an inspector does, a mentor does not 'assess' an expected capability of a teacher, but rather should seek to help his/her mentee to progress,	• **6.2a:** Trainees can explain what the difference is between an inspector and a mentor using examples and metaphors (e.g.,	**Bruce R. Joyce, Beverly Showers** - *Student Achievement Through Staff Development (3rd Edition)* Chapter 5: 'Designing Training and Peer Coaching: Our Needs for Learning (especially about demonstration, modeling and practice)'	• **Small Group Work:** In small groups, using lesson plans and textbooks, Trainees prepare a classroom observation, by writing

59

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
whatever level the person may be at. This often means accepting the beginning teacher as well as the more experienced one. This topic presents the different kinds of classroom observation that are specific to a mentor's work and how their outcomes differ from those that an inspector might carry out. This includes: - Team teaching - Mentors observing mentees - Mentees observing mentors - Both the mentor and mentee observing other teachers ***Key Discussion Questions:*** 1. Inspectors have traditionally played the role of a 'policeman' in Cambodia's schools. Do you think this is an effective model to help teachers to improve their classroom practice? Why or why not? 2. What in your opinion are the differences between an 'inspector' and a 'mentor'? 3. Ideally, what should the purpose of a classroom observation be? 4. How should one prepare for a classroom observation, so that it becomes a useful learning opportunity for the teacher?	policeman, facilitator, etc.). - **6.2b:** Trainees can explain why mentors are likely to be more effective in helping teachers to improve their classroom practice. - **6.2c:** Trainees can explain the purpose of classroom observation. - **6.2d:** They can effectively prepare for an observation by discussing a lesson plan that will be implemented during the observation.		their teaching objectives and relating them to a few attention points for observers (such as classroom management, students' attitude, accuracy or clarity). In short: what could go wrong?

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
5. What kind of activities should we prefer for classroom observation? **Hours:** 4 hours			
Topic 6.3: The Difference between Mentoring & Teacher Supervision: In this topic, Trainees will learn that aggressive promotion of new teaching techniques can lead to bad decisions in the classroom, not only because teachers are reluctant to implement them when they feel threatened, but rather because the given techniques may not be relevant to the situation at hand. This topic explores how a mentor can guide the decisions of his mentee, with objectives and advice rather than orders and mandatory advisories. It emphasizes the consistency between teacher's training and students' achievement. *Key Discussion Questions:* 1. When should a teacher try a new technique in order to fulfill his/her own training, without compromising students learning? How to find the good occasion to implement it? 2. Who chooses pedagogical approaches? How should we link teaching strategies to specific objectives? How can we evaluate the relevance of a strategy to a given situation? **Hours:** 4 hours	• **6.3.a** Trainees make links between student achievement and implementation of new techniques. • **6.3.b** They can define priorities in teacher training by looking at the needs of students. •	**Bruce R. Joyce, Beverly Showers** - *Student Achievement Through Staff Development (3rd Edition)* Chapter 1: 'Student Learning as the Goal: Learning by Everyone as an Ethos'	• **Case Study Review:** Considering different indicators such as school records, disciplinary reports, and parents' complaints, Trainees suggest training courses, even if they are not expert in the field.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 7: Mentoring as a Teacher Development Approach (Part 2: Practical Applications) (15 Hours)			
Topic 7.1: Establishing the Credibility of a Mentor: Trainees will explore specific situations in which they may be challenged to establish their credibility as a mentor. For example, older teachers may not wish acknowledge of a teacher in a mentoring role who is younger than he or she is (especially in Cambodia). Trainees will participate in discussions that provide strategies for dealing with such situations in order to help other teachers change/improve their classroom practice. These techniques will be vital to help future mentors identify the factors and behaviors that can either favor or hinder their credibility. Some of the techniques reviewed under this topic include the concept of 'continuous learning,' 'ego control,' 'disarming conversation' and the effective use of 'humor.' Trainees will also learn to identify some of the main channels for 'self-education' and 'co-education.' ***Key Discussion Questions:*** 1. How can a mentor improve his/her own knowledge in in their subject and in their teaching practice? 2. Should a mentor hide his or her mistakes and will doing so improve credibility? Why or why not? 3. When will I know I am ready to become a mentor? 4. What can make older teachers listen to me? 5. What can be done when we don't have the answer? 6. What kinds of practices should one try to change in a mentee? Who should determine these practices?	• **7.1a:** Trainees can identify key techniques that a mentor can use to improve his or her credibility (e.g., ego control, honesty in admitting mistakes, etc.). • **7.1b:** Trainees can identify suitable solutions to specific challenges that a mentor might face that relate to his or her credibility. • **7.1c:** Trainees can design their own objectives for professional and academic improvement.	*Short Mentorship Video: How to Gain Credibility and Trust:* https://www.youtube.com/watch?v=VBeb1HWmeCY Bruce R. Joyce, Beverly Showers - *Student Achievement Through Staff Development (3rd Edition)* Chapter 3: 'Sources of Tested Content: Inquiries on Teaching and Learning'	• **Small Group Work:** In small groups, Trainees should identify 5 challenges that mentor might face and identify suitable responses by mentor to these challenges. Some of the challenges may be suggested by the Instructor to get the groups moving on their assignment. Each group should then present their scenarios and solutions to the whole group and be prepared to defend their responses. • The following Matrix might be used for this exercise: **Challenge** **Solution** 1. A Mentee expects the mentor to be

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
7. What practices should perhaps remain the same? 8. Should a mentor be a role model or a facilitator or both? Explain your answer. 9. How can one learn from those whom we are also supposed to train? **Hours:** 4 hours			perfect. 2. A Mentee rejects a mentor's advice because she is too young. 3. ??? 4. ??? 5. ???
Topic 7.2: A Mentor's Need to Build Trust and an Effective Relationship: Skilled and enthusiastic practitioners are generally eager to pass on their knowledge to younger ones. Young and inexperienced teachers are generally eager to learn and recognize their need for improvement. Too often, however, their good intentions don't match what actually happens, because of mistakes in communication and misunderstandings. Trainees will learn about the dynamics of these interactions, how they can be avoided, and how a mentor can build trust with his or her mentee. *Key Discussion Questions:* 1. Part of your initial responsibility as a mentor is to establish rapport and start building trust. List some strategies you would employ to begin developing a positive mentor-mentee relationship. 2. What are some common communication barriers to	After completing this topic, Trainees will be able to do the following: • **7.2.a** Examine who they are as a mentor. • **7.2.b** Plan and conduct a 'getting to know you' conversation. • **7.2c:** Explore ways to promote and enhance communication. • **7.2d:** Avoid miscommunication by harmonizing verbal and nonverbal signals.	*https://mentormodules.com/ The videos are quite interesting, although they are a little bit artificial.* *Trust and Relationship Building:* *https://mentormodules.com/lesson/trust-and-relationship-building/ (good video)* *https://www.teachingchannel.org/video/mentoring-for-new-teachers Good example*	• **Large Group Discussion:** Trainees will observe a video of a mentor and mentee and be able to critique what worked well in the interaction and what did not work well.

63

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
successful interpersonal communication highlighted in the module? 3. During an unofficial observation, you notice a new teacher is struggling with classroom management. You kindly ask if you two can meet to discuss her management skills, but she insists that everything is fine. How can you help her understand your point of view and begin problem solving without causing her to become defensive? **Hours:** 4 hours			
Topic 7.3: Enhancing a Mentee's Knowledge of Subject Expertise and Standards: Increasing a mentee's expertise in subject curricular expertise is a big part of the mentor's job. It's not unusual for a new teacher to get excited about a new lesson that may not be so relevant to the curriculum. As a future mentor, Trainees will want to maintain that enthusiasm while ensuring that the lesson will fulfill instructional objectives and be managed in the most effective way. Advising a new teacher about curricular standards without squashing enthusiasm is a big challenge for mentors that Trainees will study under this topic. *Key Discussion Questions:* • In addition to grade level standards, what other considerations should new teachers focus on when designing lesson plans for students? • How can a mentor support a new teacher to plan and	After completing this topic, Trainees will be able to do the following: • **7.3a:** Support new teachers as they examine subject matter and grade level standards • **7.3b:** Help new teachers to connect their instruction to official curricular standards, especially as these may relate to the Bac II Examination. • **7.3c:** Support new teachers as they	*Improving a Mentee's Knowledge of Standards:* *https://mentormodules.com/lesson/knowledge-of-standards/*	• **Large Group Discussion:** Trainees will observe a video of a mentor and mentee and be able to critique what worked well in the interaction and what did not work well.

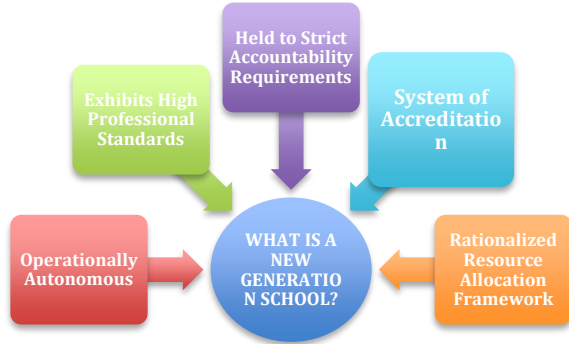| Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
deliver instruction focused on the key concepts in the curriculum? **Next, Think back to your initial responses and consider the questions below.** • After working through the resources in this module, do you still agree with your initial thoughts? • Has your perspective shifted in any way? If so, what aspects of your responses would you change? • As a mentor, where would you begin with supporting a new teacher who has a lot of exciting new ideas about teaching but may not fully understand the curriculum? • What questions should a new teacher ask herself as they relate to unit/lesson planning and instruction? **Hours:** 4 hours	differentiate instruction and integrate multicultural education into the official curricular standards of MoEYS.		
Topic 7.4: Useful Methods Through Which to Create a Professional Relationship between a Mentor and a Mentee: The relationship between a mentor and his protégé is often a long-term one. It can also be very personal. This topic will explore various techniques for building effective relationships in order to help Trainees build strong but constructive relationships with their mentor/ mentee. They consider both sides of the relationship. *Key Discussion Questions:* 1. Have you ever mentored anyone before/been	• **7.4a:** Trainees can cite specific techniques to use to build a professional relationship with a mentor/mentee. • **7.4b:** Trainees understand the expectations of others regarding professional relationships. • **7.4c:** Trainees can	Hal Portner, *Being mentored* Reading of the entire book is highly recommended.	• Trainees begin to write a journal of their own difficulties and questions. • They describe a situation when they experienced loss of confidence and explain why it occurred. • They discuss in small groups to find solutions

65

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
mentored by anyone before? 2. What made the relationship work for you? What things hurt the relationship? 3. How often do you think mentors and mentees should meet? 4. What sort of relationship should a mentor and mentee have outside the school? 5. How can mentors and mentees work together to define self-improvement objectives? 6. Who should take the initiative in mentor/mentee relationship? 7. Should you favor short-term or long-term objectives? 8. Can we assume that "no news" means "good news"? How can we help someone who doesn't call for help? **Hours:** 2 hours	negotiate an organization.		to those situations.
Topic 7.5: How Mentors Should Deal with Unethical Behaviors When They Occur: In this topic, Trainees will learn how to react when they witness or hear about colleagues who have engaged in unethical behaviors or acts, especially when there are only suspicions. Through case studies, Trainees will consider the main dangers that can occur in tense situations involving unethical behavior and devise strategies to protect the different actors involved (e.g., victims, third parties, themselves, etc.) and a school's reputation. Trainees will also gain some insight into the laws regarding the issues that might have	• **7.5a:** Trainees can explain their legal and moral obligations as witnesses of criminal or unethical behaviors. • **7.5b:** Trainees can determine one or more proper courses of action to follow when an unethical act occurs based on case studies	*Teacher Professional Code.* *Richard E. Lange - A Life Saver for New Teachers_ Mentoring Case Studies to Navigate the Initial Years (2011, R&L Education)* **Note:** *These Case studies can be useful to design lessons and activities on this topic though they may need to be adapted to the Cambodian context by the instructor)*	• Trainees describe in writing the good relationship between a mentor and a mentee and the obligations of both of them. • They compare their expectations, see if they match and negotiate to design a monthly schedule.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
occurred.	that they read.		• With the entire group, we discuss how the negotiation took place.
Key Discussion Questions:	• **7.5c:** Trainees can identify suitable precautions that they may observe in order to minimize the impact of a particular incident of unethical behavior on the school and its students.		
1. What are some examples of unethical behaviors or acts that might occur in a school involving school personnel?			
2. Should one investigate an observed case of unethical behavior by oneself?			
3. How does one evaluate the seriousness of a situation involving an unethical act (e.g., has a criminal act been committed, how many persons are involved, etc.)?			
4. What is the legal responsibility of a mentor as a witness?			
5. Should one intervene directly when an unethical act occurs? When should one hand over the case to the authorities?			
6. How does one avoid doing harm to the authority or reputation of a colleague who may have been falsely accused?			
7. What should one do if more than one person is involved?			
8. What should one do if one has a special relationship with the person involved in an unethical act (e.g., he is my mentee)?			
9. What should one do if one's initial assessment was wrong?			
Hours: 6 hours			

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Topic 7.6: Understanding the Influence of Observation on Behavior: In this topic, future mentors will explore how their own behavior can influence the answers of other teachers and negatively or positively affect how they engage into a professional discussion. Through "active listening" techniques, Trainees will learn how to facilitate the reflection of their future protégés and to give well-oriented advice when they are requested to do so by an observed colleague. Trainees will also learn how to take advantage of a conference to improve one's classroom practice, if they one is a mentee, or to conduct it, if one is to become a mentor. ***Key Discussion Questions:*** 1. Why do you think it is important not to rush to judgment about an observed classroom? 2. What is the difference between the description of how a lesson was delivered and an interpretation of how the lesson was delivered? 3. Do you always share your opinion about something? Do you ever think it is important not to express one's opinion? In what instances might withholding one's opinion be most advised? 4. Do you always ask the questions you might have about something? What might prevent you from doing so? **Hours:** 4 Hours	• **7.6a:** Trainees can conduct a conference (e.g., in the context of a role play) using "active listening" skills to both avoid premature or inappropriate judgment and facilitate communication between mentor and mentee.	*Definition of active listening:* https://www.thebalancecareers.com/active-listening-skills-with-examples-2059684 *Carl Rogers* *Exercises:* https://www.trainingzone.co.uk/develop/cpd/trainers-tips-active-listening-exercises https://blog.udemy.com/listening-skills-exercises/ http://www.people-communicating.com/listening-exercises.html	• **Role Play:** Following a discussion of techniques to use when conducting a one-on-one teacher conference, Trainees should be asked to take on the roles of a mentor and a mentee and apply these techniques appropriately. These techniques should include: ○ Active Listening ○ Avoidance of Judgment ○ Promoting self-evaluation through Socratic questioning ○ Discriminating between 'description' and 'interpretation', etc. • Other Trainees should observe and give their impressions of what occurred. Multiple role play sessions may be organized to give all participants a chance to use their skills.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 8: New Generation Schools as an Agent for Moral Social Change (15 Hours)			
Topic 8.1: What is a New Generation School? This topic provides an overview of the philosophical foundation of a New Generation School. In this respect, Trainees will learn that MoEYS has identified *Five Core Principles* defining what a New Generation School is, described in the diagram below. Trainees will explore how the principles of governance, professionalism, autonomy, accreditation, and rationalized resource allocation each play out in a New Generation School. The core principle underlying a New Generation School relates above all to its *new governance structure.* Trainees will be led through a discussion about how and why the features identified distinguish a New Generation School from a normal school. As part of the learning process, Trainees will compare their prior understanding of a New Generation School to what they have learned in the class and through their readings.	• **8.1a:** Trainees can define a New Generation School in terms of its Five Core Principles. • **8.1b:** Trainees can compare and contrast their previous and current understanding of a New Generation School based on their readings and discussions with other trainees. • **8.1c:** Trainees can explain how the principle of 'Good Governance' affects the implementation of the other four Core Elements of a New Generation School.	MoEYS (2018), *New Generation School Operational Guidelines,* Phnom Penh: MoEYS. (pp 1-9) MoEYS (2016), *New Generation School Policy,* Phnom Penh: MoEYS. *Short Documentary on New Generation Schools:* *https://www.facebook.com/MissionOfThe Week/videos/2121776947873596/UzpfST UwMTY5NDIyMzE5MzcwODoyMjgxMjYzN Dg1MjM2NzY0/*	• **Individual Writing Assignment (Before and After):** Before reading assigned reading assignments, each Trainee should write down their current understanding of a New Generation School BEFORE the class begins, focusing on key definitions and characteristics of such schools. They should then write down their understanding of key characteristics of a New Generation School AFTER discussions have been completed. Trainees may use the table below to help organize their thoughts. *My Understanding of a New Generation School . .*

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Key Discussion Questions 1. What was your previous understanding of a New Generation School based on what you had heard and read? 2. How has your understanding of a New Generation School evolved based on your subsequent readings and current discussions? 3. Accountability is seen as the most central element of a New Generation School. Based on your understanding of a New Generation School, how does this principle influence and reinforce the other four elements indicated in the diagram? **Hours:** 4 Hours			Before After • • • • • • • • • After completing the table above, Trainees can then share how their understanding of a New Generation School has changed from their previous conceptions.
Topic 8.2: New Generation Schools as Part of the Education Reform Landscape in Cambodia: This session helps Trainees to better understand the evolution of educational reform in Cambodia and how New Generation	• **8.2a:** Trainees can describe key changes in educational development strategies	Bredenberg, K. (2019) 'Progress with Reforming Secondary Education,' from *Education in Cambodia: From Year Zero to International Standards*, Singapore:	• **Small Group Work:** Break the class into two or three small groups. Pass out poster

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Schools relate to the historical changes described. This evolution in educational reforms refers mainly to the many failures of educational investment during the 1990s and how the Ministry of Education, Youth, and Sport responded to these failures during the first and second Educational Reform Cycles that began in 2000. Discussions will help Trainees understand that the government achieved major improvements in 'educational access' during early reforms but were unable to realize much improvement in 'educational quality.' This lack of progress in improving quality occurred in spite of major investment, leading to the conclusion that 'management' of resources is as important as the investment of resources themselves. As a result, this session will help demonstrate how changing 'educational governance' became a major focus of a new Educational Reform Cycle that started in 2014, leading directly to the policy decision to create a parallel educational system within the existing system called, New Generation Schools. *Key Discussion Questions* 1. Based on your readings, why did educational investment largely fail in the 1990s? 2. How did educational development policies change after 2000? 3. Why did some development strategies in the First Education Reform Cycle succeed while others failed? 4. New Generation Schools have grown out of the conclusion that 'Investment without accountability is	from the 1990s until the present day. • **8.2b:** Trainees can explain how each succeeding wave of educational investment and reform incorporated lessons learned from the previous cycle, starting in the 1990s. • **8.2c:** Trainees can explain how New Generation Schools grew out of the lessons learned from earlier educational investment cycles.	Springer Publishers. *(To be made available as a handout)*	paper and marker pens and ask each group to develop a diagrammatic timeline that can explain how development policy has changed through three waves of educational reform starting in the 1990s and continuing through the First Educational Reform Cycle to the present day. Ask groups to present their depictions to one another in plenary session and see how they differ in terms of their conceptualization of events and strategies.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
futile.' Expand on what this statement means to you in terms of changes in policy formulation and implementation during the Second Education Reform Cycle. How do New Generation Schools exemplify this statement? **Hours:** 4 Hours			
Topic 8.3: New Generation Schools as a Threat to the Status Quo: This topic explains that while New Generation School Reforms have been popular with most parents and the leadership in MoEYS, there is also strong resistance to NGS expansion from school managers, teachers, and some bureaucrats. This resistance stems from the threat that NGS reforms pose to vested interests in Cambodian society as these relate to private income generating activities in many schools, particularly secondary schools. Trainees will explore readings that describe the pervasiveness of private teaching among public school teachers and how deeply entrenched such behaviors are. Opposition to NGS reforms also stem from other sources including some donors who view investments in New Generation Schools as inimical to social equity concerns in Cambodian society. Trainees will examine arguments and readings from many perspectives that help to explain the perspectives of those who oppose NGS reforms but also the undeniable logic of expanding these reforms as a means to achieve long-term change in the Cambodian education system. ***Key Discussion Questions*** 1. Who are some of the people in Cambodian society that	• **8.3a:** Trainees can explain why there is opposition to New Generation School reforms in terms of the proponents of this opposition (e.g., teachers, school managers, donors, etc.) and what their arguments are. • **8.3b:** Trainees can critique the arguments of those opposing New Generation School Reforms noting both strong and weak points. • **9.3c:** Trainees can identify responses to criticisms of opponents of New Generation	UNDP (2014) *Curbing Private Tutoring and Informal Fees in Cambodia's Basic Education,* Phnom Penh: United Nations. (pp. 3 to 8; pp. 15 to 32) *(Available in NGPRC Library)* *Teacher Demonstrations at Preah Sisovath HS Opposing New Generation Schools:* *http://freshnewsasia.com/index.php/en/localnews/99594-2018-09-19-12-56-55.html* *Case Study: Events at Amphoevan HS* *(To be made available as a handout)* *Short Essay: Are New Generation Schools Elitist Institutions?* *(To be made available as a handout)*	• **Small Group Work:** In small groups, ask Trainees to map out who the opponents of New Generation Schools are, what is the basis of their opposition, and do their reasons for opposition have merit or not. Trainees may try using the following matrix to help organize their thinking when completing this task. | NGS Opponent Groups	Reasons for Opposition	Merits	Demerits
Teachers	•	•	•
	•		
School	•	•	•	

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
oppose New Generation School Reforms? 2. Why do some groups of educational stakeholders oppose New Generation School Reforms? Do their reasons for opposition differ according to the group that they come from? How do these reasons differ? How are they alike? 3. NGS proponents often critique the opposition of those who stand against New Generation Schools as 1) Self-serving and 2) Short-sighted. Do you agree with this critique and if so, can you expand on this critique (e.g., why is it self-serving? Why is it short-sighted? etc.)? 4. Do you think that New Generation Schools are 'elitist' institutions? Why or why not? 5. How do you think proponents of New Generation School reforms should deal with those who oppose them? Should push-back be firm and overt or indirect and subtle? Can you justify your answers and give examples of each mode of response? **Hours:** 4 Hours	Schools that are both direct and indirect.		Directors ??? • • • ?? • • • • When groups have completed their assignment, they should compare their assessments and discuss why there might be differences.

Stream 2: Educational Research in English

(6 Modules – 6 Credits)

Mini-Thesis (Counted as Module 7)

Topic List

Module 1: Distinguishing between the Different Kinds of Educational Research	**Module 5: English for Understanding Methods & Procedures Used in Research (Part 2: quantitative)**
Topic 1.1 Reading 'Primary Research Articles' and 'Review Articles' in English and Knowing the Difference	Topic 5.1: English for the Experimental Method
Topic 1.2: Meta-Analysis as a Review Article Sub-Genre: Advantages and Limitations	**Module 6: How to Write Educational Research Papers: The Building Blocks of Writing Research Papers (Part 1)**
Module 2: Understanding the Role of Quantitative Data Analysis in Educational Research	Topic 6.1: Language Building Blocks - Punctuation and Grammar for the Research Paper
Topic 2.1: Understanding the Basic Principles of Quantitative Research: Variables and hypotheses, Sample and Sampling, and Validity and Reliability	Topic 6.2: Outlining and Writing the Various Parts of the Research Paper
Topic 2.2: The Use of Descriptive Statistics in Educational Research and Key English Terms	**Module 7: How to Write Educational Research Papers: Applied Principles (Part 2)**
Topic 2.3: The Use of Inferential Statistics in Educational Research and Key English Terms	Topic 7.1: Practical Applications for Writing the Research Paper: Writing a Review Article (Mini-Thesis)
Module 3: How to Critically Read Educational Research: Useful Techniques and Principles in Critiquing Research Articles	
Topic 3.1: Describing and Detecting Logical Fallacies in Educational Research	
Topic 3.2: Helpful Guidelines in Critiquing Research Articles and Their Applications	
Module 4: English for Understanding Methods & Procedures Used in Research (Part 1: qualitative)	
Topic 4.1: Understanding the Basic Principles of Qualitative Research: Its characteristics, philosophical assumptions, step in qualitative research, data analysis, and data interpretation.	
Topic 4.2: English for the Narrative Method	
Topic 4.3: English for the Case Study Method	

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 1: Distinguishing between the Different Kinds of Educational Research			
Topic 1.1: Reading 'Primary Research Articles' and 'Review Articles' in English and Knowing the Difference: This topic introduces trainees to different genres of research writing. There are essentially two broad categories of research writing in this regard, namely: (i) Primary Research Articles and (ii) Review Articles (sometimes also referred to as Literatures Reviews). Within these genres, there are also sub-genres such as Editorial Reviews and Book Reviews, which are both forms of the Review Article. In studying the difference between these two genres of articles, trainees will be presented with key English terms, which they will be expected to define and use in discussions. Key terminology in this respect includes such words as, *empirical, primary data, secondary data, experimental, sample, random, non-random, etc.* Trainees will read a number of articles under this topic and will be expected to classify them and define the basis for their classifications. **Key Discussion Questions:** 5. What kinds of articles do you think are the most difficult to write? Explain your answer. 6. Which of these two research genres do you find easier to read? Explain your answer. Which of	• **1.1a:** Trainees can define the differences between various genres of educational research. • **1.1b:** Trainees can classify research articles according to the genre that they represent. • **1.1c:** Trainees can discuss the structure and content of research articles of all genres using specialized English terminology that they learn during the course.	*What's the Difference between a Research Article and a Review Article?* *https://www.jwu-ri.libanswers.com/friendly.php?slug=faq/141979* *List of Key Terms* *(To be provided to trainees as a Handout)* *Sample Primary Data Research Article:* *Nonoyama-Tarumi, Y. et al. (2009), Impact of School Readiness Program Interventions on Children's Learning in Cambodia, International Journal of Educational Development, 39-45.* **(Article 1)** *http://www.kapekh.org/files/report_file/56-en.pdf* *Sample Review Article* *Tan, C. (2007) Education Reforms in Cambodia: Issues and Concerns, Educational Research for Policy and Practice, 6(1)* **(Article 2)**	• ***Small Group Work:*** In small groups, create a description of the sample articles that you read the night before using the terms provided in your List of Key Terms Handout. Use a matrix such as the example of provided below to make your description. Present your description to the main group. | Parameter	Article 1	Article 2
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Genre		
Data Sources		
Sampling		
Data Collection Methods		
Theoretical Grounding		
Key			

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
these research genres do you have the most experience in reading? 7. Can you describe each of the sample genre articles that you read using at least five of the technical terms from the List of Key Terms Handout? (e.g., empirical, primary data, secondary data, experimental, etc.). 8. Can an article be non-empirical but still scholarly? Why or why not? When is an article considered to have 'scholarly' credentials? 9. What research genre is best for generating new ideas and concepts? Which genre is best for reinforcing or supporting existing theories? **Hours:** 7.5 Hours		*https://www.researchgate.net/publication/44837563_Education_reforms_in_Cambodia_Issues_and_concerns*	Concepts
Topic 1.2: Meta-Analysis as a Review Article Sub-Genre: Advantages and Limitations: Meta-analyses are a kind of review tool in which researchers can aggregate the impacts of hundreds of research studies to make determinations about the effect of a particular intervention, trend, or social phenomenon. Meta-analysis falls under the research genre of a 'review study.' In this topic, trainees will learn about the characteristics of meta-analyses; how they aggregate effect size measures; and how such studies have been a useful tool for quick reviews of hundreds of research studies. The limitations of meta-analysis research will also be examined. Trainees will be expected to read	• **1.2a:** Trainees can define what a Meta-analysis is and what its advantages are. • **1.2b:** Trainees can provide a synopsis and critique of a meta-analysis that they have read. • **1.2c:** Trainees can make arguments for and against the use of meta-	*Ahn, S. et al. (2012), A Review of Meta-analyses in Education, Review of Educational Research, Vol. 82(4).* *https://www.researchgate.net/publication/258183176_A_Review_of_Meta-Analyses_in_Education* *Efforts Increase to Boost Meta-Analysis* *https://www.the-scientist.com/news/efforts-increase-to-boost-validity-of-meta-analyses-57185*	• ***Individual Work:*** Each individual trainee should identify a meta-analysis from the literature (see article by Ahn) on a topic of interest to them (e.g., automatic promotion, grade repetition, specific teaching methods, etc.) and write a one-page synopsis which they must present to the class

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
examples of meta-analyses on topics that might interest them (e.g., automatic promotion, repetition, etc.) and provide a short critique to seminar classmates. **Key Discussion Questions** 1. Why do you think meta-analysis came into use as a new technique for research review? 2. Why must one be cautious when interpreting the findings of a meta-analysis? 3. What are some of the limitations of meta-analyses studies? How can some of these limitations be mitigated? **Hours:** 7.5 Hours	analyses in research, based on an understanding of their strengths and weaknesses.		with a short critique (5 minutes per student)

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 2: Understanding the Role of Quantitative Data Analysis in Educational Research			
Topic 2.1: Understanding the Basic Principles of Quantitative Research: Research Question, Variables and hypotheses, Sample and Sampling, and Validity and Reliability Under this topic, trainees will review the basic principles of quantitative research such as the establishment of research questions, the meaning and use of variables and hypotheses, how to select appropriate sample size and use of sampling technique (e.g., probability and non-probability sampling), and the consideration of validity and reliability in research. Discussion will include the practical use of variables (dependent and independent variables) in research and form some hypotheses to test in the follow topic. Also, the pros and cons of sampling technique and how to use any technique appropriately will bring into discussion. Last but not least, trainees will be expected to present the use of validity and reliability in research. **Key Discussion Questions** 1. What is research question? What are the criteria to consider a good research question? 2. What is variable (dependent versus independent variable, quantitative versus categorical variable, extraneous variables)? 3. What is hypothesis? What are the advantages and disadvantages of research hypothesis stating in	• **2.1a:** Trainees can establish good research question (clear, researchable, significance, and ethical). • **2.1b:** Trainees can define and form the variables and hypotheses in research. Also, they can identify what its advantages are. • **2.1c:** Trainees can explain difference type of sampling technique and its importance in research. Trainees also be able to define the use of each sampling technique in appropriate situation. • **2.1d:** Trainees can explain the meaning of validity and define its use of instrument in	*Gay, L.R. (1992), Educational Research: Competencies for Analysis and Application, New York: Macmillan Publishing (Part 1: Foundational Concept and Process)* *(To be provided to trainees as a Handout)* *Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). How to Design and Evaluate Research in Education (8th ed.). New York: McGraw-Hill. (Part 2: The Basics of Educational Research)* *(To be provided to trainees as a Handout)*	• **Small Group Work:** Trainees have to divide into three groups (4 or 5 each group). There are three topics and each group have to response one topic. The topics are (1) Research Problem, Research Question, Variables, and Hypotheses in research, (2) Sample and Sampling in Research, and (3) Validity and Reliability. They have to use Textbook and other sources as references of their work and each group have 1.5 hours to deliver the content of given topic. Trainees can use varies techniques such as slide presentation, ask other trainees to do exercise, make group discussion, etc. The final aim is that

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
addition to research question? 4. What is a sample and why it is needed in research? What are the advantages and disadvantages of probability and non-probability sampling technique? Explain the appropriate situation to use any sampling technique. 5. What is validity and reliability? Define the validity and reliability used in some research study, explain the problem of validity and reliability in research, and how to deal with such problems? **Hours:** 4.5 Hours	educational research. Also, trainees can explain the meaning of reliability and define its use in educational research.		to make other trainees clearly understand on each topic. • **Written assignment:** Review different data points in the EMIS Statistical Yearbook. Then, point out one problem and propose research questions, key variables, and hypotheses that response to the research problem. The propose research questions should be from 3 to 5 questions. Then, generating the hypotheses that response to those questions if needed. *(This assignment will be used in next assignment as it supposes trainees to do descriptive and inferential data analysis.)*
Topic 2.1: The Use of Descriptive Statistics in Educational Research and Key English Terms: Under this topic, trainees will review the meaning of	• **2.1a:** Trainees can explain in English the meaning of technical	*Gay, L.R. (1992), Educational Research: Competencies for Analysis and Application, New York: Macmillan Publishing (Chapter*	• **Written Assignment:** Review different data points in the EMIS

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
terms relating to Descriptive Statistics and their use in educational research. This includes using measures of variability (e.g., standard deviation), central tendency (e.g., mode, median, and mean), relative position (e.g., percentiles) and relationship (e.g., correlation coefficients) to meaningfully describe many data points with a small number of indices. Discussions will review not only the meaning of terms relating to Descriptive Statistics but also how they are calculated and applied. Finally, trainees will be responsible for doing written assignments in English in which they review data generated by EMIS and make basic analyses of national level data using Descriptive Statistics. **Key Discussion Questions** 1. Make a list of possible applications where measures of central tendency could be useful (e.g., school efficiency data, test scores, etc.). 2. What are the strengths and weaknesses of the mode, median, and mean. Give specific examples to support your case. 3. Make a list of possible applications where measures of variability could be useful (e.g., test scores, income levels, etc.). What sorts of questions can a measure of variability help to answer? 4. How can measures of relative position help you to interpret the distribution of A, B, C, D, E, and F scores on the Bac II Examination?	terms relating to Descriptive Statistics (e.g., measures of central tendency, variability, mean, standard deviation, percentage, etc.). • **2.1b:** Trainees can answer interpretive questions (in English) relating to the meaning of various Descriptive Statistics when expressed as specific values. • **2.1c:** Trainees can write in English a short description of basic calculations involving EMIS statistics that use Descriptive Statistics.	*12: Descriptive Statistics)* *(To be provided to trainees as a Handout)* *List of Descriptive Statistical Terms and Definitions* *(To be provided to trainees as a Handout)* *Downing, D., (1989), Statistics the Easy Way, New York: Barron's Education Series.* *(Exercises from this text to be provided to trainees as Handouts, p. 21)* *Educational Management & Information Statistics (2018)*	Statistical Yearbook. Then, use measures of central tendency, variability, relative position, and relationship to describe one or more sets of data points (e.g., dropout rates, transition rates, etc.). Your analysis should be 2 to 3 pages long. • **Individual Presentations**: Use the written assignment referred to above as the basis for a 10-minute PowerPoint Presentation in English to your classmates.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
5. What are some of the strengths and weaknesses of measures of relationship when making statistical analyses? **Hours:** 6 Hours			
Topic 2.2: The Use of Inferential Statistics in Educational Research and Key English Terms: Under this topic, trainees will review the meaning of terms relating to Inferential Statistics and their use in educational research. This includes the use of concepts such as standard error, tests of significance, effect size, t-tests, chi-square tests, and regressions to make inferences about how likely an impact is real or due to chance and what the size of that impact is. Discussions will review not only the meaning of terms relating to Inferential Statistics but also how they are calculated and interpreted. Finally, trainees will be responsible for doing written assignments in English in which they review sample studies that present analyses of data points that use Inferential Statistics and provide an interpretation of the conclusions implied. **Key Discussion Questions:** 1. Based on your understanding of Descriptive and Inferential Statistics, what is the most important difference between these two kinds of measures? 2. What is the difference between nominal, ordinal, interval, and ratio data? Why is it important to distinguish between these kinds of data?	• **2.2a:** Trainees can explain in English the meaning of technical terms relating to inferential statistics (e.g., significance, probability, standard error, confidence interval, regression, etc.). • **2.2b:** Trainees can answer interpretive questions (in English) relating to the meaning of various inferential statistics when expressed as specific values. • **2.2c:** Trainees can carry out simple analyses of data distributions to determine whether	*Gay, L.R. (1992), Educational Research: Competencies for Analysis and Application, New York: Macmillan Publishing (Chapter 13: Inferential Statistics)* *(To be provided to trainees as a Handout)* *List of Descriptive Statistical Terms and Definitions* *(To be provided to trainees as a Handout)* *Downing, D., (1989), Statistics the Easy Way, New York: Barron's Education Series.* *(Exercises from this text to be provided to trainees as Handouts, p. 206-208)* *du Prei (2009) Confidence Interval or p-Value?, Deutsche Arzteblatt International, Vol. 106 (19)* *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2689604/*	• **Group Work:** Do a survey of your classmates to determine whether they have a BA or BS degree and then do a Chi-Square Analysis to test the hypothesis that males tend to study science more frequently than females. Present your findings to the whole class to determine whether the analysis was done correctly. • **Written Assignment:** Find a review article on a topic of interest to you (e.g., dropout, repetition, etc.) and review any inferential statistics that are presented. Write a short summary of what

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
3. Is it possible for something to be 'almost' significant? Why or why not? 4. Do significance levels tell you anything about how big the differences between two sets of scores might be? Explain your answer. 5. What is the difference between 'statistical significance' and 'confidence interval'? What sorts of information do each of these things indicate? **Hours:** 9 Hours	there are any significant differences between them. • **2.2d:** Trainees can write a short description of the conclusions implied by a review of inferential statistics provided in a specific article or other written context.		the statistics mean and what they indicate about impact levels, the significance of differences, and effect size. Your analysis should be 2 to 3 pages long. • **Individual Presentations**: Use the written assignment referred to above as the basis for a 10-minute PowerPoint Presentation in English to your classmates.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 3: How to Critically Read Educational Research: Useful Techniques and Principles in Critiquing Research Articles			
Topic 3.1: Describing and Detecting Logical Fallacies in Educational Research: Under this topic, trainees will become familiar with the many examples of logical fallacies that often undermine the veracity of a conclusion or point of view. This includes such fallacies known as *post hoc, argumentum ad hominem, false equivalencies, etc.* Trainees will learn that logical fallacies are reasoning errors that ultimately weaken an argument. Trainees will then explore ways to avoid fallacies starting with the first step, which is to know how to recognize them. To help trainees better recognize Logical Fallacies, they will be presented with definitions and specific examples of each. Trainees will then review actual examples of fallacious writing on education issues where they will be expected to identify the fallacies present and justify their analysis. **Key Discussion Questions** 1. Do you think that logical fallacies are always deliberate? If not, then why do they occur so often in written literature? 2. Based on your new understanding of Logical Fallacies, have you ever wittingly or unwittingly used such fallacies in your writing or conversations with friends? Can you give some examples? 3. How does the ability to root out logical fallacies from academic research help to improve the	**3.1a:** Trainees can define various examples of logical fallacies as described in course documents. **3.1b:** Trainees can identify specific examples of logical fallacies when they occur in a given piece of research that they are critiquing. **3.1c:** Trainees can give multiple examples of logical fallacies that they think of on their own.	*Summary of Logical Fallacies* *(To be provided to trainees as a Handout)* *TIME Magazine (2016) Screens in Schools are a $60 billion Hoax* http://time.com/4474496/screens-schools-hoax/ *The Logical Fallacies of TIME Magazine's Technology Hoax Article* http://ajjuliani.com/the-logical-fallacies-of-time-magazines-technology-hoax-article/	• **Group Assignment:** Trainees will work in small groups to identify at least one example that exemplifies a specific logical fallacy discussed during class. Each group should identify examples for at least five logical fallacies that have been discussed. The examples should be presented to the seminar to determine whether they are actually appropriate examples or not. • **Group Assignment:** Trainees will work together in a small group to identify specific uses of logical fallacies in an actual issues article on education. The analysis of each group will then be shared with

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
effectiveness of educators? 4. How can teachers use their own knowledge of logical fallacies to improve their teaching? Be sure to give some specific examples. **Hours:** 7.5 Hours			the whole class.
Topic 3.2: Helpful Guidelines in Critiquing Research Articles and Their Applications: This topic seeks to give trainees the necessary skills to undertake a systematic critique of a research article. First, trainees will learn how to critically assess the meaning of statistics (especially the concept of probability) presented in articles and how they are sometimes misused to arrive at conclusions that are not justified. The second part of this topic will then focus on explaining an 11-step process of review that starts with the identification of research questions and what the study hopes to prove and ending with consultations with other scholarly reviews about the strengths and weaknesses of the study. This process of review will also entail drawing diagrams that outline the links between specific data collection activities and the research questions/ hypotheses posed by the researchers at the outset. Trainees will be expected to do written assignments and presentations where they develop a critique in English about a research article of their choice using the principles discussed above. **Key Discussion Questions**	**3.2a:** Trainees can identify specific examples of the misuse of statistics. **3.2b:** Trainees can use the 11-point process for article review discussed during the course to form a critique of a research article of their own choice. **3.2c:** Trainees can write a critique in English of an article that they have read using the review principles discussed in class. **3.2d:** Trainees can make a presentation summarizing their written critique of a research article that they have read.	*Reinhart, A. (2015) Statistics Done Wrong, San Francisco: No Starch Publications.* *(To be provided to trainees as a Resource Document)* *How to Read and Understand a Scientific Paper: A Guide for Non-scientists* *https://violentmetaphors.com/2013/08/25/how-to-read-and-understand-a-scientific-paper-2/*	• **Written Assignment:** Trainees will select a research article that is either a primary data research article or a review article to critique. Trainees should select articles in an area that interests them (e.g., use of technology in instruction, charter schools, automatic promotion, etc.). After reading the article thoroughly and using the 11-step review process discussed, they should develop a written critique of 3 to 5 pages (in English) that will be presented to the whole class as a

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
1. According to the reading assignments you have reviewed, what are some of the ways in which statistics are often misused? Please give specific examples. 2. Articles that are not peer-reviewed are often more suspect in their conclusions than those that are not. Why do you think so? 3. Michael Specter (author of *'Denialism: How Irrational Thinking Hinders Scientific Progress'*) once said, "Be skeptical. But when you get proof, accept proof." What do you think Specter meant by this statement? 4. What should you do when conclusions reached by a research article are counter-intuitive or are in opposition to your own personal experience? Are you ever tempted to 'cherry pick' research articles that support your own prior viewpoint? **Hours:** 7.5 Hours			PowerPoint presentation. The written assignment and presentation should give some assessment of the merits and/or demerits of the article that was critiqued.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 4: English for Understanding Methods & Procedures Used in Research (Part 1)			
Topic 4.1: Understanding the Basic Principles of Qualitative Research: Its characteristics, philosophical assumptions, steps in qualitative research, data analysis, and data interpretation Under this topic, trainees will review the key characteristics of qualitative research and its types such as narrative, case study, ethnographic, and grounded theory, which are the common design in qualitative study. This will not go deeply in that, just focus on general characteristics. The philosophical assumption such as Ontological, Epistemological, Axiological, and Methodology will take into discussion. Additionally, the step for conducting qualitative research will choose to discuss in the class. Then, trainees will discuss about the way of analysis qualitative data by reviewing many research articles which use qualitative research design. Some concepts such as (1) content analysis, (2) case study, and (3) grounded theory will discuss in the class. During the discussion of this topic, trainees will get better understand on the importance of qualitative research and understand the means of its analysis. **Key Discussion Questions** 1. What is Qualitative Research? Explain its nature and characteristics 2. What are the steps of qualitative research? 3. Explain each type of qualitative research designs which use in educational field.	4.1a: Trainees can explain the what is qualitative research and its nature. 4.1b: Trainees can explain the designs of qualitative research and its characteristics. 4.1c: Trainees can reflect the type of data analysis techniques with some research article. 4.1d: Trainees will be able to distinguish between qualitative and quantitative research approach.	*Mills, G. E., & Gay, L. R. (2016). Educational Research: Competencies for Analysis and Application (11th ed.). London: Pearson Education Limited. (Chapter 12: Narrative Research, Chapter 13: Ethnographic Research, Chapter 14: Case Study)* *(To be provided to trainees as a Handout)* *Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). How to Design and Evaluate Research in Education (8th ed.). New York: McGraw-Hill. (Part 6: Qualitative Research Methodologies)* *(To be provided to trainees as a Handout)*	• **Small Group Presentations:** Trainees have to divide into three groups (4 or 5 in each group). There are three topics and each group have to response one topic. The topics are: (1) Philosophical Assumption of Qualitative Research, (2) Step in Qualitative Research, and (3) Qualitative Data Analysis and Its Limitation. They have to use Textbook and other sources as references of their work and each group have 1.5 hours to deliver the content of given topic. Trainees can use varies techniques such as slide presentation, ask other trainees to do exercise,

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
4. Explain each type of data analysis techniques used in qualitative research and reflect to the articles that provided. 5. Compare the qualitative and quantitative research **Hours:** 4.5 Hours			make group discussion, etc. The final aim is that to make other trainees clearly understand on each topic.
Topic 4.2: English for the Narrative Method: Narrative research is the study of how different humans experience the world around them, and it involves a methodology that allows people to tell the stories of their "storied lives". Under this topic, trainees will review the key characteristics and purposes of narrative research, by reviewing many articles. The process of narrative research will identify and take into discussion to make trainees realize on its process. Like the other type of research designs, narrative method involves: (1) identify the purpose of research, (2) identify individuals who can learn from, (3) develop narrative research questions, (4) consider the researcher's role and define the research settings, (5) establish the relationship with participants to construct the narrative and validate the accuracy of the story. The challenges and limitations of narrative study will review based on example of read articles. **Key Discussion Questions** 1. Explain the states and major purposes of narrative study and how important it is in educational field?	• **4.2a:** Trainees can identify the major purposes and characteristics of narrative research • **4.2b:** Trainees can explain each step in narrative research • **4.2c:** Trainees can explore the validation process of narrative research in educational field • **4.2d:** Trainees can identify key important element in narrative research	*Mills, G. E., & Gay, L. R. (2016). Educational Research: Competencies for Analysis and Application (11th ed.). London: Pearson Education Limited. (Chapter 12: Narrative Research)* *(To be provided to trainees as a Resource Document)* *Polkinghorne, D. E. (2007). Validity issues in narrative research. Qualitative Inquiry, 13(4), 471-486.*	• **Written Assignment:** Trainee require to find any research article which employs narrative method and write a short reflection on that paper. First, they have to make summary the article (topic, background, theoretical consideration, method, and key findings). Then, they need to analyze on limitation of the article. Last but not least, they have to provide their suggest ion to improve. One to two pages will be collected and every trainee have to give short presentation on what they have done (5

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
2. What are the steps involving in narrative method and explain each step with precise example? 3. What are the key important elements of narrative research? How to build "Trust" with participants? 4. There are some potential challenges and limitations of narrative research, what are they? How to eliminate or minimize those challenges? 5. How to validate narrative research findings? **Hours:** 6 Hours			to 10 minutes).
Topic 4.3: English for the Case Study Method: Case study research is a qualitative research approach in which researcher focuses on a unit of study known as a bounded system (e.g., individual teachers, a classroom, or a school). Under this topic, trainees will review the key characteristics of case study research in school context. Trainees have to explain its purpose and importance by reviewing many articles employed cast study research. There are many types of case study research such as (1) a single case study, (2) multiple case study, and (3) collective case study. Trainees will learn on how to use these methods in appropriate way. There is not much difference from other research design, cast study method involves: (1) define the purpose of the study, (2) develop initial research questions, (3) review related literature, (4) develop a rational of case selection, (5) determine data collection method, and (6) conduct data analysis and	• **4.3a:** Trainees can identify the major purposes and characteristics of narrative research • **4.3b:** Trainees can explain each step in narrative research • **4.3c:** Trainees can identify some issues in selection process • **4.3d:** Trainees can use data analysis tools to perform with many types of case study research (e.g. a single case study) • **4.3e:** Trainees can	*Mills, G. E., & Gay, L. R. (2016). Educational Research: Competencies for Analysis and Application (11th ed.). London: Pearson Education Limited. (Chapter 14: Case Study Research)* *(To be provided to trainees as a Resource Document)* *Case study of Piaget "Cognitive Development Theory"*	• **Small Group Assignment:** Trainees will work in groups of 3 or 4 and each group develop a case study research. The paper include topic, problem statement, research objectives and questions, methodology with detail plan of data analysis. The problem should base on what they experienced with as a teacher. It is obvious that trainees have to review with some related article in

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
interpretation. Trainees will review detail on these steps and reflect with some related articles. The challenges and limitations of case study will take into discussion in a whole class. **Key Discussion Questions** 1. Why case study research is needed in educational field? 2. How to formulate appropriate question for case study research? 3. What are the critical issues in selection sample for case study research? How these issues effect to the findings? AND how to minimize these kinds of issue? 4. How to make data analysis for multiple case selection? 5. What are the differences between narrative method and case study method? 6. There is a concern "**researcher bias**" in qualitative research, as a researcher, how you deal with this? **Hours:** 6 Hours	distinguish the differences between narrative and case study research		order to get more understanding on the topic. Each group has to submit written paper which contain 4 to 5 pages and do presentation on this proposal.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 5: English for Understanding Methods & Procedures Used in Research (Part 2)			
Topic 5.1: English for the Experimental Method: Under this topic, trainees will review the key characteristics of Experimental Research Studies, which are perhaps the most difficult to design and execute given their use of treatment and control groups. Unlike other research methods, researchers using Experimental Methods directly control one or more independent variables, control one or more other relevant variables, and observe the effect on one or more dependent variables. Trainees will understand that the Experimental Method is the most valid method for testing hypotheses concerning cause-and-effect relationships because of the opportunity for direct manipulation of variables afforded by this method. This refers to provisions to organize treatment and control conditions. Trainees will also learn how to distinguish between multiple kinds of Experimental Research Studies, namely (i) Pre-experimental Research Designs (in which a single group is tested in a pre- and post-test condition); (ii) Quasi-experimental Research Designs (in which subjects may not be randomly assigned to different treatment conditions to ensure equivalence); and (iii) True Experimental Designs (in which the design can control for nearly all sources of invalidity). Trainees will learn how to critique Experimental Research Studies by reviewing the way that they address internal (e.g., history of subjects, maturation	• **5.1a:** Trainees can define the Experimental Research Method in terms of its key characteristics and in the way that it manipulates variables. • **5.1b:** Trainees can explain the purpose of treatment and control groups. • **5.1c:** Trainees can briefly describe internal and external validity as this applies to the Experimental Method. • **5.1d:** Trainees can describe the major steps in designing and conducting an Experimental Research Study (i.e., definition of the problem, selection of subjects, construction of tools, validation of tools, etc.).	*Gay, L.R. (1992), Educational Research: Competencies for Analysis and Application, New York: Macmillan Publishing (Chapter 10: The Experimental Method, pp. 297-370)* *(To be provided to trainees as a Resource Document)* *School to School International (2018), E-books 4 Khmer Project Assessment Report, Washington, DC: All Children Reading-USAID.* *http://www.kapekh.org/files/report_file/94-en.pdf*	• Small Group Presentations: Trainees will work in groups of 3 or 4 persons to review an Experimental Research study that they choose together. A list of potential studies to read will be provided to the class by the instructor. If Trainees would like to choose their own study, they may also do so, after presenting an alternative study to the instructor for his/her concurrence. During the presentation, which should last about 10 to 15 minutes, trainees will summarize the key problem identified in the study, its conclusions, and a critique of the validity of the conclusions made. Each presentation will

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
effects, contamination from pre-tests, etc.) and external validity (e.g., the generalizability of the study to a broader population or environment). The steps involved in conducting Experimental Research Studies are the same as for other types of research and involve (i) the definition of a problem; (ii) formulation of hypotheses or research questions; (iii) systematic collection of data; (iv) objective evaluation of data; and (v) confirmation or disconfirmation of one's research questions. Trainees will also receive exposure to specific examples of Experimental Research Studies that they will be expected to review together as a small group. During the discussions on this topic, trainees will better understand the merits and limitations of Experimental Research Studies and how to rigorously assess the validity of the conclusions reached. **Key Discussion Questions** 1. How are studies that use the Experimental Research Method different from all other methods that have been studied so far? Are there any similarities between Experimental Research and other methods? 2. What do you see as some of the merits and limitations of Experimental Research Studies? 3. Do you see any moral concerns in how control and treatment groups are formed under an Experimental Research Design, especially where	• **5.1e:** Trainees can describe the different kinds of Experimental Research Designs including (i) Pre-experimental Designs; (ii) Quasi-experimental Designs; and (iii) True Experimental Designs. • **5.1f:** Trainees can summarize the methods, results, and conclusions of selected Experimental Research Studies. • **5.1g:** Trainees can critique Experimental Research Studies using principles relating to data collection tools, sampling procedures, how they deal with non-response, the quality of the data analysis, and threats to experimental validity. • **5.1h:** Trainees can identify useful		be followed by a plenary discussion of the study in which trainees can have an informed exchange of ideas and opinions about the study. • **Debate:** Trainees already learnt two kind of educational research – Quantitative VS qualitative. The topic of debate is "Qualitative Researcher assumes that the world is made up of multiple realities, socially constructed by different individual views of the same situation". One group of students has to support this statement while another group reject this. They have to find reference to support what they raise. The debate should include

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
children are concerned? 4. What are some of the factors that may undermine the equivalence between subjects in a treatment group and those in a control group? How does one address issues of equivalence? 5. Do you see any useful applications of Experimental Research Studies to the Cambodian context? Can you give some examples of areas that would be interesting to investigate using this method? Be sure to justify your answer(s). **Hours:** 15 Hours	applications (i.e., identifying important issues in need of experimental investigation) of the Experimental Research method in Cambodia, being sure to justify the appropriateness of this method for the investigation of the issues that they identify.		the philosophical assumption of both approaches (Ontological, Epistemological, Axiological, and Methodology) and the interpretation of the results.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 6: How to Write Educational Research Papers: The Building Blocks of Writing Research Papers (Part 1)			
Topic 6.1: Language Building Blocks for Research (1): Punctuation and Grammar for the Research Paper: The content under this topic helps trainees to practice basic writing skills that concern what one calls the 'building blocks' of research language. Trainees will use a standard textbook for this topic called, *English for Academic Research,* which will be provided to each candidate. Activities under this topic will focus on Sections 1 to 9 of the textbook that include practice exercises on Punctuation, Word Order, Grammar, and Writing Style. Around half of the exercises in Sections 1 – 9 of the assigned textbook can be done rapidly, without the aid of a teacher. They are thus suitable for self-study. Other exercises will require trainees to write extended pieces of text, which will be reviewed and corrected by NGPRC instructor. **Hours:** 10 Hours	• **6.1a:** Trainees can use guidelines for completing basic writing exercises that pertain to academic research including the following topics: Punctuation, Word Order, Grammar, and Writing Style. • **6.1b:** Trainees can correct writing exercises on agreed topical areas following a review of their exercises by the instructor.	*A. Wallwork, (2016) English for Academic Research: Writing Exercises, New York: Springer. (Sections 1 to 9)* *(A copy of this book will be provided to each student)*	• **Writing Assignments:** Trainees complete writing exercises provided in the *English for Academic Research* textbook and review them in class with the instructor (Sections 1 to 9 of the textbook).
Topic 6.2: Outlining and Writing the Various Parts of the Research Paper: Following the completion of Sections 1 to 9 of the *English for Academic Research* text, trainees will next focus on Section 10 of this textbook, which deals with writing the various sections of a research article. At this stage, trainees will be expected to choose a topic for their Mini-thesis, which should be a research article that deals either with primary data or the review of other research (i.e., a	• **6.2a:** Trainees can create an outline that summarizes the key content for their Mini-Thesis. • **6.2b:** Trainees can successfully improve various sections of a	*A. Wallwork, (2016) English for Academic Research: Writing Exercises, New York: Springer. (Section 10)* *(A copy of this book will be provided to each student)* *Online Phrasebook: English for Research* http://stephenhowe.info/wp-content/uploads/2014/11/PhraseBookSample.pdf	• **Writing Assignment:** Trainees select a topic for their Mini-thesis and create an outline of what they want to research using the guidelines provided in Section 10 of the textbook, *English for Academic Writing.*

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
research review article). Once they have chosen their research topic, trainees will be expected to create an outline for each section of the Mini-thesis (e.g., Abstract, Introduction, Methodology, etc.) using the guidelines provided in Section 10 of the textbook, *English for Academic Research.* Section 10 brings all the previously learned writing skills together in exercises on writing specific sections of a manuscript – from the Abstract to the Discussion Section and References. The topic and draft outline presented by trainees will need to be discussed and approved by the instructor. Trainees may need to make modifications in their topic and outline based on discussions with their instructor. **Hours:** 5 Hours	draft research outline in English based on the feedback that they receive from the instructor.		Trainees will then discuss the topic and outline with their instructor to get final approval, along with any revisions in the outline as agreed with the instructor.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 7: How to Write Educational Research Papers: Applied Principles (Part 2: The Mini-Thesis)			
Topic 7.1: Practical Applications for Writing the Research Paper: Writing a Research Article (Mini-Thesis): This topic focuses on supporting trainees with the task of writing a Mini-thesis of at least 30 pages on an approved research topic. The topic may either involve primary data collection or the review of previous research. The Mini-Thesis must be formatted according to international standards of manuscript writing, which will be explained by the instructor (see the link provided). Trainees will meet the instructor periodically during the 6-week period allocated for writing the research paper to discuss problems and receive guidance on successful completion of the Mini-thesis within the assigned time period. **Hours:** 15 Hours *Note:* The Mini-thesis is the equivalent of six modules and six credits towards the Master's Degree.	• **7.1a:** Trainees can use specific writing principles and thesis writing guidelines to write each of the sections of a research manuscript (e.g., Abstract, Acknowledgements, Introduction, etc.) in English. • **7.1b:** Trainees can successfully improve various sections of a draft manuscript in English based on the feedback that they receive from the instructor.	*A. Wallwork, (2016) English for Academic Research: Writing Exercises, New York: Springer. (Section 10)* *(A copy of this book will be provided to each student)* *Thesis and Dissertation Formatting* *https://uwm.edu/graduateschool/thesis-dissertation-formatting/*	• **Individual Assignment:** Each student will be expected to write a research article of at least 30 pages (double spaced) in English on a topic of interest to them personally. The topic must first have been approved by the instructor in the form of a research outline. The manuscript should be formatted according to the international standards generally observed for the writing of a thesis (see link).

Stream 3: ICT in Education

(8 Modules)

Module 1: E-safety and Digital Citizenship
Topic 1.1: **What is Digital Citizenship?**
Topic 1.2: **Maintaining Professionalism in the Digital World**
Topic 1.3: **Smartphones in the Classroom**
Topic 1.4: **Privacy, confidentiality and public life**

Module 2: Using ICT to Maximize Presentations for Learning
Topic 2.1: **Creating printable documents**
Topic 2.2: **Creating slideshows**
Topic 2.3: **Mathematical tools**
Module 3: Using the Internet as an Educational Resource
Topic 3.1: **How to guide students for Inquiry-Based Learning**
Topic 3.2: **Guiding students to check the reliability of the information**
Topic 3.3: **Using the Internet as a resource for the teacher**

Module 4: Student Self-Learning & ICT
Topic 4.1: **Using extensive reading to promote self-learning**
Topic 4.2: **Creating quizzes, tests and activities**

Module 5: Using Technology to Support Professional Learning Communities (social medias)
Topic 5.1: **Using ICT to coordinate projects**

Topic 5.2: **Creating online resources**

Module 6:   Using Technology to Promote Problem and Inquiry-based Teaching & Learning
Topic 6.1: **Coding as a tool for Problem- and Inquiry-based Teaching & Learning: Why Coding?**
Topic 6.2: **How to Introduce Coding**
Topic 6.3: **Real-world Problem Solving with Coding**
Module 7: Using Technology to Promote Computational Thinking
Topic 7.1: **Computational Thinking applied to Teaching and Learning**
Topic 7.2: **Problem- and Inquiry-based Teaching & Learning using Computational Thinking Principles**
Topic 7.3: **Tools for Self-reflection and Evaluation**
Module 8: Using *Observic* as a Mentoring Tool
Topic 8.1: **The software**
Topic 8.2: **Using cameras and smartphones to shoot lessons**
Topic 8.3: **Mentoring procedure with Observic (self-assessment and mentee's point of view)**
Topic 8.4: **Providing feedback (mentor's point of view)**

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Project Work or Written Assignment
Module 1: E-safety and Digital Citizenship			
Topic 1.1: What is Digital Citizenship? As technology and social media become more and more ubiquitous in Cambodian schools, the need to provide ethical guidelines to teachers to prevent abuses of technology are becoming greater and greater. These abuses include cyber-bullying, invasion of privacy, and illegal behaviors among others. These ethical guidelines are subsumed under a new area of study called Digital Citizenship. By studying this topic, Trainees will become familiar with some key concepts in Digital Citizenship as it being introduced into many schools world-wide. Some of the concepts that Trainees will discuss in this regard include the idea of a digital divide, digital literacy, digital communication, digital etiquette, digital law, digital rights, and digital health and security. Discussions will focus on which of these elements of Digital Citizenship are most relevant to Cambodian schools and what would need to be done in order to realize these elements in a New Generation School setting. *Key Discussion Questions* 1. How well-known is the concept of Digital Citizenship in Cambodia? What percentage of schools in the country do you think this is a relevant concept to	**1.1a** Trainees can define the meaning of Digital Literacy and its various elements. **1.1b** Trainees can determine those elements of Digital Citizenship that are most relevant to Cambodian schools and what measures would be needed to realize them.	*The Nine Elements of Digital Citizenship in Schools* *https://www.iste.org/docs/excerpts/DIGCI2-excerpt.pdf*	**Written Assignment:** Mike Ribble identified Nine Key Elements of Digital Citizenship in his book. Create a tabular framework that indicates which of these elements are most important in Cambodia using a scale of 3-level scale (e.g., Very Relevant, Moderate Relevant, Not Relevant, etc.). Then, identify the obstacles that one might encounter in realizing these elements of Digital Citizenship in Cambodia. Be sure to provide some details in your answer. Finally, be sure to indicate what measures might be needed to address the obstacles identified.

introduce? 2. After reviewing the list of elements that make up Digital Citizenship, which elements do you think are most relevant to Cambodia? Can you justify your responses? 3. What measures do you think would be needed to introduce these elements to Cambodian schools and what obstacles do you think you would encounter in doing so? How feasible do you think it would be to address these obstacles?			
Topic 1.2: Maintaining Professionalism in the Digital World This topic explores the moral issues that may arise as a result of the misuse of technology within the school setting. Trainees will review several case studies involving the misuse of technology and explore why the behavior is considered wrong, what the implications of the behavior are if not corrected, and whether the punishment was commensurate with the unprofessional behavior. While each of the case studies reflect teachers being disciplined by their employers for conduct involving technology, it is important to remember that texting, social networking, blogging and other new forms of communication are not the "sources" of the misconduct outlined. In each situation, the incidents were the result of poor judgment on the behalf of teachers.	• **1.2a:** Trainees can identify the potential misuses of technology that could lead to unprofessional or unethical behavior by a teacher. • **1.2b:** Based on case studies that they review as well as in class discussions, Trainees can explain how certain identified behaviors could impact negatively on the moral development of Trainees in the school. • **1.2c:** Trainees can develop a set of ethical	*Maintaining Professionalism in the Digital World* *https://www.pspc.education.pa.gov/Promoting-Ethical-Practices-Resources/Ethics-Toolkit/Unit4/Pages/Maintaining-Professionalism-in-the-Digital-World.aspx*	**Project Work:** In small groups Trainees will undertake a project to develop a code of conduct relating to the use of technology in any school setting.

Key Discussion Questions 1. In each of the case studies presented during the seminar, was the action taken to discipline a teacher commensurate with what the teacher did wrong? 2. If the unethical behavior of a teacher was not detected, how might it impact on the moral development of children/students? 3. In situations involving educator misconduct, there is an instance in which the educator makes a decision and crosses an ethical boundary. Select one of the scenarios presented in the case studies reviewed in class and identify where the educator makes the decision that crosses the line. What could the educator have done differently in that situation? **Hours:** 4 Hours	guidelines for a particular school that would help teachers know what the ethical boundaries are for the use of technology in a school setting.		
Topic 1.3: Smartphones in the Classroom It is reported that almost 40% of Cambodians have smartphones. The possession of smartphones is especially heavily concentrated among young people. The use of smartphones has greatly challenged teachers because there are often no rules governing the use of smartphones in schools. Teachers become frustrated when their students use their phones while they teach because it is both impolite and distracting. Indeed, some research has shown that schools in the UK that prohibit the use of phones in class have higher test performance scores. Many teachers overreact when students use their phones during class, which may present some ethical issues. This topic focuses on discussions of all of these issues including	• **1.3a** Trainees can assess how serious the problems are relating to the use of smartphones in the classroom. • **1.3b** Trainees can determine the positive and negative impacts stemming from the use of smartphones in the classroom. • **1.3c** Trainees can	*Teacher Frustrated with Smartphones in the Classroom* *https://www.educationworld.com/a_news/teacher-frustrated-smartphones-classroom-1502211704* *An ever-growing frustration and a barrier to teaching: Cellphones in the classroom* *http://www.startribune.com/an-ever-growing-frustration-and-a-barrier-to-teaching-cellphones-in-the-*	**In-class Group Work:** In their small groups, Trainees can develop a list of guidelines that govern the use of smartphones in a Cambodian classroom.

99

whether there should be more explicit rules about the use of phones in class and what ethical issues are relevant in such discussions. ***Key Discussion Questions*** 1. How serious a problem is the use of smartphones in classrooms in Cambodia? 2. Do you think that using smartphones affects students' academic performance negatively? 3. Should teachers be offended when students use their phones during class for texting or other reasons? 4. What measures might Cambodian schools consider to govern the use of smartphones? 5. How should teachers react to the use of smartphones in a way that is ethical but effective? **Hours:** 2 Hours	develop ethical guidelines that govern the use of smartphones in Cambodian classrooms.	*classroom/422143893/* *Do Smartphones have a place in the classroom?* *https://www.theatlantic.com/education/archive/2016/04/do-smartphones-have-a-place-in-the-classroom/480231/* *Pass the Salt (a humorous statement on digital etiquette)* *https://www.youtube.com/watch?v=6_-xTxP1hD4&frags=pl%2Cwn*	
Topic 1.4: Privacy, confidentiality and public life Social medias are powerful and popular tools to coordinate actions within a work team. They are also very popular and most Cambodian teachers already use them on a daily basis to communicate with their students or their colleagues. This raises the issue of the boundaries between the professional and private sphere. In this topic, Trainees will learn the administrator's tools to ensure the security of the communications. They'll work at a technical level, ethics and professional behavior having been discussed during the previous module.	• **1.4a:** Trainees can explain the basic rules concerning data protection and privacy from a technical point of view. • **1.4b:** They can perform the administrative tasks (editing messages, inviting and expelling members etc.) on common social medias.	*Facebook/ Google terms of use* https://www.schoolinfosystem.org/2017/05/03/the-economic-basis-of-the-internet-is-surveillance/ https://www.newser.com/story/278237/facebook-slammed-with-5b-ftc-fine-over-privacy.html	Trainees write a document regulating the discussion on a professional discussion group, or Facebook page. They take into account the intended public and the reputation of the institutions that might be involved: - Official page of the school, - English Club page on Facebook - English teachers Messenger group, This work includes the designation of the administrators and the creation of relevant accounts.

Key Discussion Questions 1. Which procedure should we follow before putting information on an official website or social media? 2. Who is responsible for administrating a group on Facebook or other social medias? 3. Who can publish information? 4. What kind of regulation should we implement? 5. How do we decide whom we invite on a group and when to expel someone? 6. How do I ensure the security of the data? 7. How can I use Social Medias to communicate with families and students? 8. How can I separate professional and private lives? 3 hours **Main platforms in use in NGS schools: Messenger, Line, Telegram.**		*https://www.wsj.com/articles/eu-nears-decisions-in-facebook-privacy-cases-11565602202* *https://searchdatabackup.techtarget.com/definition/data-protection*	They open accounts for relevant social medias and start using them in different groups. This would become a basic working habit, and could be required in other activities (for instance during the practicum or for research teams).

Module 2: Using Software as a Teaching Tool (Part 1) Using ICT to Maximize Presentations for Learning (Word, Powerpoint, Publisher and others)			
A pre-test will be conducted to assess the proficiency of the trainees with basic office software.			
Topic 2.1 Creating printable documents **Text editor** As a resource center, NGPRC must be able to publish documents for other schools. As mentors, in their respective schools the trainees will have to produce a large variety of documents to support teachers, students and other stakeholders. In this module, the trainees learn how to produce state-of-the art layouts. Respecting common principles of typography, they produce beautiful and practical documents. To this end, they use the major features of text editors such as MS Word or Open Office including styles, references, document formatting and tables of content, among others. They can insert various objects, such as tables, pictures, charts, to make the product more appealing. They can use common shortcuts to work more effectively. *Key discussion questions:* 1. What is the purpose of my document? Who is supposed to read it? 2. Are there any conventions I must follow to create the	• **2.1a:** Trainees can create a clean Word document respecting the principles of typography. • **2.1b:** They can design a proper layout using referencing tools. • **2.2c:** They can insert objects, charts, pictures and so on.	*Handout of typography in Khmer (to be found or created)* *Training pages of the Help section of MS Word or similar software.* *Branding policy of KAPE and other institutions (as relevant).*	**Project work:** Trainees produce various brochures in Khmer or English about pedagogy. They work on texts provided by the instructors. As much as possibly those texts will be used for real, internally or externally: handouts for training workshops, flyers, advertisements and so on. This project is done in relation with KAPE or NGS schools, depending on the needs*.*

document?			
3. Does my organization have any policy about branding or layout?			
4. What is the most suitable format for the output? .pdf .docx .epub			
6 hours			
Topic 2.2 Creating slideshows **PowerPoint and other visualization tools** Overuse of PowerPoint presentations in many organizations shows simultaneously the interest and the limitations of the tool. Obviously, a slideshow can make the message easier to convey, by supplementing the speech of the presenter. But the lure of technology has sometimes the reverse effect, by rendering the presentation more artificial or confuse. In this topic, Trainees learn how to improve their presentations with texts, images and other medias. They also learn how to create graphs, mind-maps and similar charts that can be inserted in such a presentation. Most importantly, they will learn how to articulate the slideshow with the objectives of the lesson (e.g. with student-centered activities). *Key discussion questions:*	• **2.2a:** Trainees can create a consistent design for their slideshows. • **2.3b:** They can insert relevant object, such as charts and pictures in their presentation. • **2.3c:** They can articulate their slideshow with their oral presentation.	*https://visualhackers.com/blo g/18-powerpoint-dos-and-donts/* *https://thevisualcommunicati onguy.com/2013/09/24/top-12-most-annoying-powerpoint-presentation-mistakes/* *https://www.slideshare.net/r ahkout/powerpoint-101-what-not-to-do*	**Project work:** Trainees prepare a slideshow to present a teaching technique of their choice for a hypothetical workshop. NB: If the presentation is especially convincing it might be more than hypothetical.

1. What is the intended audience? 2. How can I deal with a short attention span? 3. What information should be displayed on the slideshow? What should be kept for other documents or just dismissed? 4. How does the slideshow improve my presentation? How is it better than marker and whiteboard? 5. How does my presentation support student learning? 6. How can a slideshow support student-centered activities? 7. What are the best visual effects for an effective presentation? 6 hours			
Topic 2.3: Interactive Documents and Presentations with Mathematical Expressions Mathematical expressions appear frequently in documents related to mathematics and sciences. In addition, oftentimes it is needed, or useful, to include them in documents also even outside of those fields, such as in economics, geography, or even history and arts. However, inserting mathematical expressions into documents and presentations can be quite challenging. In this topic, the Trainees learn how to use software tools to create proper mathematical formulas and expressions and insert them into interactive documents and presentations.	Trainees will be able to • **2.3a** Type and organize text using the Wolfram Notebook Interface • **2.3b** Create interactive documents and presentations using the Wolfram Notebook Interface • **2.3c** Write basic mathematical expressions using the Wolfram	***Tutorials for using Wolfram Notebook Interface for documents*** *https://reference.wolfram.com/language/tutorial/WorkingWithTheNotebookInterfaceOverview.html* ***Guide for creating presentations using Wolfram Notebooks*** *https://reference.wolfram.com/language/workflowguide/CreatingDocumentsAndPresentations.html* ***Video tutorial for using Basic Math Assistant Palette***	• **Project work 1**: Trainees will create a Wolfram Notebook Document applying appropriate styling and section headers • **Project work 2**: Trainees will create a Wolfram Notebook Presentation including mathematical expressions with appropriate styling

Key Discussion Questions: 1. How to organize your thinking using interactive software tools for typesetting? 2. How to create interactive documents and presentations? 3. How to create mathematical expressions within interactive documents and presentations? **Hours: 3**	Notebook Interface - **2.3d** Save and export basic mathematical expressions, documents and presentations made using the Wolfram Notebook Interface.	*with Wolfram Desktop* *https://www.wolfram.com/broadcast/video.php?c=89&v=288* ***How to use Palettes with Wolfram Desktop*** *https://reference.wolfram.com/language/howto/UsePalettes.html* *Supplementary Materials:* ***Guide for entering and editing mathematical expressions using Wolfram Notebooks*** *https://reference.wolfram.com/language/workflowguide/EnteringAndEditingMath.html* ***Tutorial for the names of symbols and mathematical objects using Wolfram Language*** *https://reference.wolfram.com/language/tutorial/NamesOfSymbolsAndMathematicalObjects.html*	

Module 3: Using Software as a Teaching Tool (Part 2) Using the Internet as an Educational Resource (Inquiry-Based Learning)			
Topic 3.1 How to guide students for Inquiry-Based Learning? Although extremely valuable for self-directed learning, researching information on the Internet can be difficult and time-consuming, even for adults. Making teenagers do the same come with a large variety of challenges, such as classroom management and attention span. In this topic, Trainees learn how to keep an Internet activity on tracks and maximize the learning outcome. *Key discussion questions:* 1. Why, in the first place, do I want my students to go to the Internet? 2. How can I design relevant objectives and effective instructions for online activities? 3. How can we avoid distraction (games, social medias, etc.)? 4. Should we use parental filters? 5. How to avoid plagiarism?	• **3.1a:** Trainees can plan an activity on the Internet for effective learning. • **3.1b:** Trainees can use Boolean operators to focus a search on the Internet.	***Webwise for teachers*** *https://www.youtube.com/watch?v=q79UNNmXz3w* ***Boolean operators*** *https://libguides.mit.edu/c.php?g=175963&p=1158594* ***Using the Internet in the classroom:*** *http://www.phschool.com/eteach/social_studies/2000_12/essay.html* *https://www.britishcouncil.org/voices-magazine/how-help-young-learners-stay-safe-internet* *https://www.thirteen.org/edonline/concept2class/classroominternet/index_sub3.html*	*Trainees prepare an Inquiry-Based activity implying the use of the Internet.* *This lesson plan includes precise instructions, questions, interaction, expected product and process to make students work effectively.*
Topic 3.2 Guiding students to check the reliability of the information The Internet makes almost all the knowledge of humanity	• **3.2a:** Trainees can explain the importance of crediting the sources, • **3.3b:** They can	***Evaluating information:*** *https://guides.library.jhu.edu/evaluate/internet-resources*	*In groups: Trainees produce short guidelines for middle-school students. They explain how to check the quality of online information and cross sources. These guidelines should be short enough*

available. It's also a major platform for free speech. The drawback is that even the worst opinions can be expressed on the web. Increasing concerns have aroused during the last few years about fake news and other conspiracy theories. This could be considered as a threat for the quality of learning, or as an opportunity to practice critical thinking with the students. This topic explores the strategies that can be used in the classroom to filter the information obtained online. These strategies include: - Crossing sources, - Distinguishing the type of websites, - Using previous knowledge, - Checking the consistency of the resource, - Checking the background of the author, - Etc. ***Key discussion Questions:*** 1. What to do if students find inappropriate websites during their search on the Internet? 2. How reliable are institutional websites? 3. How acceptable are amateur websites for Inquiry-Based Learning? 4. How to react when students take a stand on obviously fake news (e.g. flat-earth or vaccines)? 5. What is the value of Wikipedia, and how can we encourage students to look beyond it?	summarize the main principles of fact checking,	*https://library.uaf.edu/ls101-evaluation* *https://www.youtube.com/watch?v=Jc7PZUlSnBI* *https://libraries.psu.edu/services/research-help/evaluating-information*	*to be explained in 15 minutes at the beginning of an activity, and complete enough to be useful.* *Trainees also design a policy about inappropriate content to help teachers. This include preventive and corrective actions.*

Topic 3.3: Using the Internet as a resource for the teacher; i.e. finding good quality websites for continuous learning and teaching material Many websites today, either commercial or not, propose ready-to-use educational resources. Sometimes, they even pretend to replace teachers by quizzes and other lessons. The quality of those resources varies dramatically, choosing the right one can be time-consuming, especially when it's done in a hurry. In this topic, students will identify and analyze educational websites to determine their possible outcomes and the conditions for a good implementation in the classroom or at home. *Key discussion Questions:* 1. What needs have I met as a teacher? 2. What kind of documents and resources did I lack to do my lessons effectively? 3. To what part of the curriculum (subject, grade) is the resource relevant? 4. Does its use require some adaptation or contextualization? 5. Is the information reliable? 6. How can I educate myself to become a better teacher? **4 hours**	• **3.3a:** Trainees can assess the quality of educational websites in terms of: - Accuracy - Flexibility - Relevance to the curriculum - Utility	*TO BE DETERMINED BY THE INSTRUCTOR OR BY THE TRAINEES THEMSELVES* *Must evolve*	***Individual work:*** *Students write short notes in Khmer to recommend or dismiss educational websites, so that other teachers can save time in their research.* *These notes include information such as:* - *Language* - *Subject matter* - *Level or difficulty* - *Academic value* - *Clarity* *They collect and classify the notes in a database.*

Module 4: Student Self-Learning & ICT (Literatu and X-reading)			
Topic 4.1: Using extensive reading to promote self-learning Reading is arguably more important for long-term learning than attending lessons. A facilitator who has been successful in creating reading habits has done more than any traditional teacher who is just delivering lessons. Trainees learn how to use integrated reading platforms such as X-reading, to assess students' reading. They also learn how to take the best from e-libraries and know about the advantages of various formats of ebooks, such as .mobi, .epub, .pdf. *Key Discussion Questions:* 1. How can I be sure that the students have actually read the books? 2. How can I spot cheaters? 3. What choice should I give to the students regarding their readings (or similar activities)? 4. Should I assess everything? 5. What incentives should I set up to make students read more or better books? 3 hours	• **4.1a:** Trainees can explain the interest of the platform. • **4.1b:** They can log in and organize student registration on the platform. • **4.1c:** They can follow up students' work and analyze the data. • **4.1d:** They can perform administrative tasks on the platform.	*X-reading tutorial and FAQ:* *https://xreading.com/* *Some e-libraries:* *http://www.elibraryofcambodia.org/* *http://www.dlir.org/klb-home/* *http://thekfm.blogspot.com/p/books_24.html* *https://letsreadbooksorg.wordpress.com/books/* *http://gutenberg.org/* ***Great Book Reading Program booklet and guideline.***	*As the reading applications and e-library are relatively easy to handle, the training should focus on the organization behind the technology.* *In small groups: Trainees prepare a lesson plan to explain the software to teenagers and encourage them to read. They decide relevant incentives for the children. They explain how teachers from various subjects can be involved in a reading program.*

Topic 4.2: Creating quizzes, tests and activities			
Literatu, Google Form, KAHOOT, or other similar platforms, as available on the market. Finding online resources is insufficient to promote self-learning, especially in Cambodia, because resources in Khmer are still scarce. Advanced teachers should be able to create their own resources and share them with the teaching community. Trainees learn how to use different tools to create summative assessments and other interactive activities on the Internet. To this end, they use various platforms. *Key Discussion Questions:* 1. How to convince teachers to create and share tests and activities? 2. How can we organize a database for the NGS network? 3. How should we mark the online tests? Should they be included in the students' records? 4. What precautions should we use to ensure the confidentiality of tests, if needed? 5. How can online quizzes be used to implement Differentiated Instruction? **12 hours**	• **4.2a:** Trainees can explain the advantages of software over traditional tests on paper. • **4.2b:** They can design various kinds of tests online. • **4.2c:** They can define different options to share them. • **4.2d:** They can use the control panel of the software to analyze the results of the activities.	*The "Help" section of the relevant websites.* *Literatu's website is especially comprehensive.*	*Trainees create actual tests on their respective subjects and share them with various users.* *These tests should be of various formats, lengths, and learning objectives (cf. Bloom's taxonomy).* *The tests are classified by subject, grade, difficulty and learning outcomes, so that they can be found easily in a database.*

Module 5: Using Technology to Support Professional Learning Communities (social medias)			
Topic 5.1: Using ICT to coordinate projects Modern workers must learn how to collaborate. Even teachers have to forget their old individualistic practice and work more and more as a team, for instance to prepare common assessments or extra-curricular activities. This is not an easy endeavor, especially since the timetables are complicated and endless meetings are frustrating for the participants. In this topic, trainees learn how technology can facilitate work organization. Using tools like Google Drive, Google Doc or other cloud systems, they will learn how to organize, review and edit collective work. They learn how to use the reviewing functionalities in presentation softwares. *Key Discussion Questions:* 1. Who is responsible for the administrative tasks (creating, editing, summarizing the collective work)? 2. What parts of the job require physical meetings? Which members of the team should participate to such meetings? 3. Who can request physical meetings? **4.** How is security ensured? When should documents be released to third parties? **3 hours**	• **5.1a:** Trainees can navigate through different version of a digital document. • **5.1b:** They can share and edit documents on a cloud. • **5.1c:** They can explain procedures to coworkers.	*The "Help" section of the relevant websites.*	***Group project:*** *As a training, trainees write down a short story collaboratively.*

111

Topic 5.2: Creating online resources			

Having a website is almost a necessity for a modern institution. It's relatively easy nowadays to create one. But having a website to fit precisely one's needs is another matter.
 	
In this topic, Trainees will learn basic creation tools to open a website to solve basic communication needs of a school.
Depending on the needs of partner schools, the project done by the Trainees might vary from one year to another. It can be a blog, a forum or other online resources.
They learn how to design the basic features a website should have to meet the needs of its users.
 	
Key Discussion Questions:
1. What online resources does our community need?
2. Who is responsible to create it?
3. Who will be responsible to maintain it?
4. What do they need to know in order to run the website after its creation?
5. What features do we want?
6. How do we coordinate the work of different teams?
 	
12 hours
	• **5.2a:** Trainees can analyze the needs for online resources.
	• **5.2b:** They can design the basic features of a website.
	• **5.2c:** They can explain how to use the website to its final users.
		Depending on the project at hand.	***Project work:*** *Trainees create and administrate a website for the NGS network.*
			It could be a forum, a blog or other projects, to be decided each year according to the needs.
			Several teams define and present the different components of the website:
			  - *Regulation,*
			  - *Functionalities,*
			  - *Administration tools and team,*
			  - *Categories*
			  - *Layout*
			  - *FAQ*
			  - *And so on...*
			They coordinate their actions, to make the website run smoothly.
			Depending on the nature of the website, the trainees continue to administrate it after graduation or hand it over to other users (school principal, teachers etc.)
			
			Suggestion for the first years:
			  - *A website to publish the resources created by the center*
			  - *A professional forum for teachers in Cambodia.*

Module 6: Using ICT as a Tool for Problem-Based learning			
Topic 6.1: Coding as a tool for Problem- and Inquiry-based Teaching & Learning: Why Coding? Problem- and inquiry-based teaching and learning methods are intended to promote independent thinking and action skills. In this Topic, the Trainees will discuss advantages and challenges related to the problem- and inquiry-based pedagogical methods. Particularly, the discussions will include different methods for self-expression, including the use of technology and coding. *Key Discussion Questions:* 1. Why would you apply problem- and inquiry-based approaches in classrooms? 2. Why would you apply coding in teaching & learning? **Hours: 3**	Trainees will be able to • **6.1a** Explain when and why problem- & inquiry-based teaching could be used in classrooms • **6.1b** Explain why coding could be a useful concept in teaching & learning	***Reading Assignment*** *https://medium.com/@mres/computational-fluency-776143c8d725*	• Reflecting on the reading assignment, the group will have a discussion on the objectives and effectiveness of problem-, inquiry, and project-based teaching & learning approaches around the topic: *Teaching & Learning without technology vs Teaching & Learning with technology* • As a preparation for future assignments and to support students' personal note-taking, students will write a short text in which they briefly reflect on the activities covered during the Topic 6.1 under a heading: "When, why and how would I use problem- and inquiry-based teaching methods?", for example, they can answer "In my subject matter, which parts of the curriculum could problem- and inquiry-based teaching methods be applied to and why."
Topic 6.2: Coding as a tool for Problem- and Inquiry-based Teaching & Learning: How to Introduce Coding In this Topic, the Trainees will learn beginner friendly ways to broaden self-expression abilities using technology and coding. The Trainees will apply these abilities with problem-based learning activities.	Trainees will be able to • **6.2a** Identify and find relevant information and resources related to how coding could be introduced in classroom activities of their choice • **6.2b** Explain how	***Curriculum Documents*** • *https://scratch.mit.edu/* • *https://code.org/* • *Creating Art with Code:* *https://curriculum.code.org/csf-19/express/5/* • *Problem Solving with Code:*	• Students will complete a lesson "Art with Code" from Code.org • Students will complete Chapter 1 of "Problem Solving with Code" from Code.org • As a preparation for future assignments and to support students' personal note-taking, students will write a short text in

Key Discussion Questions: 1. When one can apply coding in teaching & learning? 2. How one can apply coding in teaching & learning? **Hours: 6**	coding can be introduced to their teaching • **6.2c** Explain how the subject dependent learning objectives could be better achieved by including coding activities	https://curriculum.code.org/csd-19/unit1/	which they briefly reflect on the activities covered during the Topic 6.2 under a heading: "When, why and how would I use coding in my teaching?"
Topic 6.3: Coding as a tool for Problem- and Inquiry-based Teaching & Learning: Real-world Problem Solving with Coding Real-world problems are typically multifaceted and complex issues. In order to efficiently and effectively address such problems requires an ability to handle different types of information. In this Topic, the Trainees will learn how technology and coding can be used to obtain, manage and share different types of information. They will be introduced to tools and methods that are currently used to address and solve real-world problems. They will also learn how to apply these methods and tools to create educational content applied to different subject matters. **Key Discussion Questions:** 1. How to address real-world problems in teaching & learning 2. How to create relevant and relatable teaching & learning materials using technology and coding **Hours: 6**	Trainees will be able to • **6.3a** Explain the basics of functional programming • **6.3b** Produce and present educational content integrating real-world data using functional programming with the Wolfram Language	*Curriculum Documents* • *Wolfram Documentation Center* *https://www.wolfram.com/wolfram-u/an-elementary-introduction-to-the-wolfram-language/*	• Students will create an interactive presentation including tools and methods covered in the Topic 6.3, such as manipulative graphics or animations. In this presentation the students will transform their reflections from the previous Topics 6.1 and 6.2 and prepare an interactive, narrative-driven presentation answering "When, why and how I would use coding in my teaching"

Module 7: Using Technology to Promote Computational Thinking (Wolfram)			
Topic 7.1: Introducing Computational Thinking for Teaching Computational Thinking has been introduced as a method to approach and solve real-world problems. In this Topic, the Trainees will discuss what is meant by Computational Thinking and why it could be a useful concept in teaching & learning. ***Key Discussion Questions:*** 1. What is Computational Thinking? 2. Why would you teach and learn Computational Thinking? **Hours: 3**	Trainees will be able to • **7.1a** Describe and explain what is Computational Thinking • **7.1b** Describe and explain why Computational could be applied in the classroom	*History and existing definitions of Computational Thinking* • *https://en.wikipedia.org/wiki/Computational_thinking* • *https://computationalthinkingcourse.withgoogle.com/unit?lesson=8&unit=1* • *https://www.cs.cmu.edu/~CompThink/* • *https://www.computationinitiative.org/mission/* • *https://www.wolframalpha.com/input/?i=what+is+computational+thinking* • *https://www.computationalthinking.org/#what-computational-thinking* *Articles on why one would teach and learn Computational Thinking* • *https://www.pwc.co.nz/automation* • *https://medium.com/@mres/computational-fluency-776143c8d725*	• The group will have a discussion on the definition and objectives of Computational Thinking as applied to teaching & learning, answering questions "What is Computational?", "What is Thinking?", "What is Computational Thinking?", "Why would you apply or teach Computational Thinking?" • The students will write a textual narrative component of their computational essay, which they will complete in the Topic 7.2., the topic of the essay is "Computational Thinking in my Classroom" and the students can adjust the content to the subject of their choice.

Topic 7.2: How Would You Teach Computational Thinking?	Trainees will be able to	An article describing how one could approach teaching Computational Thinking	• Students will design and create a brief Computational Classroom Activity of their choice
In this Topic, the Trainees will learn about practical Computational Thinking approaches and how they could be used in the classroom to improve teaching and learning, particularly related to advancing problem-solving skills.	• **7.2a** Identify and find relevant information and resources related to applications of Computational Thinking for teaching and learning	• *https://blog.stephenwolfram.com/2016/09/how-to-teach-computational-thinking/*	• Students will design and create Computational Lesson Plan corresponding to their Computational Classroom Activity
Key Discussion Questions: 1. What are the Computational Thinking principles? 2. What are the available Computational Thinking resources? 3. How to create interactive, problem- and inquiry-based teaching & learning materials applying Computational Thinking principles **Hours: 6 h**	• **7.2b** Apply Wolfram functional programming language and other related resources to create interactive content relevant for teaching and learning, such as lesson plans, classroom activities and homework assignments	*An article about ways to integrate Computational Thinking into curriculum* • *http://www.conradwolfram.com/home/anchoring-computational-thinking-in-todays-curriculum* *Other Computational Thinking resources for teachers* *https://www.computationinitiative.org/resources/teaching*	• Students will update the essay from the Topic 7.1 "Computational Thinking in my Classroom" with interactive content, such as manipulative graphics or animations, using Wolfram Notebook Interface
Topic 7.3: Tools for Self-reflection and Evaluating Computational Thinking	Trainees will be able to	*An article about "What is a Computational Essay"*	• Students will individually conduct the Computational Activity following the lesson plan they prepared in the Topic 7.2. while other students follow the instructions and complete the activity.
In this Topic, the Trainees will learn how computation can be used to improve self-reflection as well as how it can be used to increase the efficiency and effectiveness of assignment evaluation.	• **7.3a** Conduct self-reflection using computational essay process • **7.3b** Effectively analyze and evaluate computational essays • **7.3c** Provide, receive and reflect upon constructive feedback	*https://blog.stephenwolfram.com/2017/11/what-is-a-computational-essay/*	• Students will create Computational Essays on Computational Activities conducted by the other students in the Topic 7.3.

	using computational resources		• Students will complete Peer feedback forms
Key Discussion Questions: 1. How to improve self-reflection using technology? 2. How to evaluate Computational Thinking? **Hours: 6**			

Module 8: Using *Observic* as a Mentoring Tool			
Topic 8.1: The software *Observic* is a mentoring platform to share and review videos of professional practices. It allows teachers to seek help from experienced advisers who might reside far away from their school. It's an essential complement to the face-to-face mentoring that is the core of the NGPRC training. When a specialist mentor isn't available in their school to answer technical questions of teachers, they can find responses from any of the expert in NGPRC network. Graduates from NGPRC will be some of those experts. In this topic, Trainees will learn how to operate the software, in most of its components, excluding only the role of administrator. They create their own accounts for both roles of mentees and mentors. They learn how to submit and edit videos with a suitable format. **Key Discussion Questions:** 1. What do we need Observic for? 2. What part of a lesson do we need to review via Observic?	• **8.1a:** Trainees will be able to create an account on the platform. • **8.1b:** They can perform the basic tasks allowed by the platform: submit a video for review, fill a form, check their messages etc. • **8.1c:** They can do basic video editing, such as reducing definition for Internet use, or cutting down useless footage.	*Training documentation provided by the developer.*	***Practical exercises:** participants actually create their accounts and send messages.*

117

3. What are the most useful features of the platform? **4.** How can we use the control panels, at relevant levels of responsibilities (mentee and mentor)?			
Topic 8.2: Using cameras and smartphones to shoot lessons In this topic, participants learn how to make proper footage, for review videos. They shoot short videos in school environment to practice their skills as cameramen before they do it in the classroom. They are trained with several devices, mainly smartphones and digital cameras. In this case, cameras are essentially tools for learning. The purpose isn't to make art, but relevant footages. A strong emphasis is put on the purpose of the video, i.e. on the pedagogical questions that it is supposed to answer. *Key Discussion Questions:* 1. What are my objectives during this lesson? What do I want to get feedback on? 2. Should I ask a student to monitor the footage? 3. How can I set up the camera in order to avoid disturbing the lesson?	• **8.2a:** Trainees can choose the right place to set up a camera in order to shoot a lesson. • **8.2b:** They can use cameras and smartphones to take a video. • **8.2c:** They can use the proper settings to produce a clear footage. • **8.2d:** They use *Observic* to edit the video.	*Technical manual of available cameras, if required.* *Making videos with smartphones:*	***Project work:*** *the trainees shoot and edit a short video to illustrate the life of a school.* *For this pre-training, it doesn't have to be a footage of an actual lesson. That will be done on a daily basis during the practicum. The aim of this exercise is merely to familiarize the trainees with cameras, so that the operation runs smoothly during the practicum itself. It can include interviews and other actions.*

4. How should I protect the devices? 5. Static setting or dynamic setting? **6.** How can we adjust the light a focal point to get a good resolution and avoid blurry images?			
Topic 8.3 Mentoring procedure with Observic (self-assessment and mentee's point of view) One of the main features of Observic is the possibility to conduct self-assessment, by reviewing one's own performance. Also, before they can help others, it is good that mentors understand the point-of-view of the mentee. It will make them much better facilitators, when they shift roles. In this topic, the trainees define priorities for classroom observation. They reflect on their own weaknesses and strengths. They consider activities they want to try and the kind of feedback they can request. *Key Discussion Questions:* 1. What are my objectives in terms of professional development? 2. What technique should I try first? 3. How is it related to the needs of the students? What are they supposed to learn during the session that will be observed? 4. How can I organize the remote observation? **5.** What could prevent me from using Observic? How can	• **8.3a:** Trainees can make a request of review. • **8.3b:** They can ask relevant questions regarding to their teaching practice.	*Procedure guidelines to be written by the NGPRC team, the NGS technical team and the developer. (Will evolve with experience)*	*This is a direct preparation for the practicum. Actual classroom observation and remote observation will be done simultaneously, for comparison.* *Trainees use the self-reviewing form of Observic..*

I make mentees feel more comfortable with the Observic system?			
Topic 8.4 Providing feedback (mentor's point of view) In this topic, the trainees are prepared to endorse their role of future mentors, at a very practical level. They write down constructive critics about the work of other teachers, in a spirit of empowerment and practicality. They learn how to define development objectives that are reachable, concrete and efficient. This topic is the final preparation before the Practicum. *Key Discussion Questions:* 1. What is good in this lesson? 2. What could I use as an example? 3. What needs improvement? 4. Is it really the priority? 5. How can I say it respectfully? 6. How can I make teachers feel comfortable with *Observic*?	• **8.4a:** Trainees can provide feedback on someone else's practice using Observic. • **8.4b:** They can define new objectives for further classroom observations.	*Procedure guidelines to be written by the NGPRC team, the NGS technical team and the developer.*	*Using the first* Observic *database, the trainees write their own comments on other teachers' practices.* *Group discussion ensue to compare the pieces of advice.*

Stream 4: General Methodological Systems & Principles

(7 Modules)

Topic List

Module 1: What Knowledge Is and Where It Comes from.
Topic 1.1: How is New Knowledge created?
Topic 1.2: Concepts of curriculum and curriculum development
Topic 1.3: Curriculum structure
Topic 1.4: Curriculum and student learning outcomes

Module 2: Thinking about Learning: How People Learn
Topic 2.1: Introduction to Thinking Typologies: (Bloom, Guilford, etc.)
Topic 2.2: The Origins of Bloom's Taxonomy
Topic 2.3: Bloom's Taxonomy: Lower Order Thinking Skills
Topic 2.4: Bloom's Taxonomy: Higher Order Thinking Skills
Topic 2.5: The Influence of Motivation on Learning

Module 3: Promoting Critical Thinking in the Classroom
Topic 3.1: Defining Terms as a Technique to Think Critically
Topic 3.2: Techniques to Organize Content and Thought
Topic 3.3: Dialectical Approaches to Promoting Critical Thinking
Topic 3.4: How to think critically and collaboratively at the same time?

Module 4: Thinking about Teaching (Building Blocks of Teaching)
Topic 4.1: General Introduction to Styles of Teaching
Topic 4.2: Didactic Methods
Topic 4.3: Alternatives to Didactic Methods
Topic 4.4: Teacher-Student Relationships

Module 5: Teaching & Learning for the 21st Century
Topic 5.1: Educational Needs for Living in the New Century
Topic 5.2: Cooperative Learning: Theory and Practice

Topic 5.3: Constructivist Learning

Module 6: Understanding School Change in terms of Culture and Systems-based Approaches
Topic 6.1: Using Systems-based Approaches to Understand Educational Change
Topic 6.2: School Cultures that Emphasize Collaboration and Competition

Module 7: Principles of Student Assessment
Topic 7.1: The Purpose and Kinds of Evaluation
Topic 7.2: Test Design and Planning
Topic 7.3: Using Tests as a Pedagogical Tool
Topic 7.4: Concepts of Validity and Reliability

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Module 1: Knowledge and the curriculum			
Topic 1.1: Concepts of knowledge and ways in which peoples have transmitted it. Trainees will share and refine their ideas and opinions about the concept of knowledge and how schools have come to fill a role in society of passing on basic knowledge as part of a child's development. Trainees will discuss definitions of knowledge and formulate a definition of their own. They will also consider the differences between fact and opinion and theoretical/abstract and practical knowledge (understandings and skills) and how "new" knowledge is generated. Trainees will discuss why and how peoples in the world, in all cultures and societies, have decided that passing on knowledge from generation to generation is valuable and ways in which it has been done. They will consider the reasons why, in modern times, the transmission of knowledge has been increasingly entrusted to schools, why many countries have developed extensive state-run education systems and why children spend far more time at school than ever before. **Key Discussion Questions:** 1. How was/is knowledge passed on by people who	• **1.1a:** Trainees can give a definition of knowledge and state their ideas about why people consider it important to pass on knowledge from generation to generation. • **1.1b:** Trainees can explain how literacy fundamentally changed how knowledge was the maintained and transferred. • **1.1c**: Trainees can use examples to discuss the difference between fact and as opinion and theoretical and practical knowledge and how "new" knowledge is generated. • **1.1d:** Trainees can explain why public schooling became widespread in	Piaget's experiments and the construction of knowledge by children: video *Piaget on Piaget.* https://www.psychologytoday.com/us/blog/theory-knowledge/201312/what-is-knowledge-brief-primer	• **Trainees work in small groups** to prepare 10-minute presentations to share as a conclusion to the topic on one of the following: - *How do we know that the Earth is round?* - *Galileo and the birth of the scientific method* - *Lavoisier, the first chemist* - *How did Mendeleyev create the periodic table of elements?* - *Fleming and serendipity* - *The discovery of Neptune*

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
did/do not read or write? 2. How did literacy revolutionize the maintenance and transmission of knowledge? 3. Why have schools assumed such an important role in the transmission on knowledge and governments taken responsibility for developing education systems? 4. What is the difference between information/data and knowledge? 5. What is the difference between fact and opinion? 6. Is knowledge static or is it expanding/evolving? How is new knowledge created? What are the implications for teachers and learners? **Hours: 4**	modern times and became the main way societies ensure basic knowledge is passed on to children as part of their development		
Topic 1.2: Concepts of curriculum and curriculum development. Trainees discuss and identify the various kinds of knowledge usually considered important to be taught to children at school - generally called "the curriculum". [Trainees are made aware of the difference between a "Curriculum" – a specific document summarizing intended content coverage and outcomes – and the 'curriculum' – the materials and methods used in teaching and learning and students' experience of schooling in general.] Curricula are often similar from country to country. Most curricula go well beyond subject content	• **1.2a:** Trainees can explain, giving examples, that school curricula usually describe subject content while also setting out non-academic outcomes (attitudes and values) • **1.2b:** Trainees can give examples of factors which influence decisions about	On hidden curriculum: Ronald C. Doll *Curriculum improvement* 8th edition p.5 . *Curriculum Framework in Khmer - Final Version*	• **Trainees work in small groups** to prepare 10-minute presentations to share as a conclusion to the topic on one of the following: - Who is responsible for making decisions about the content of the Cambodian (MoEYS) curriculum? Give examples about specific content areas.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
(language, maths, science etc.) as they also aim to develop personal characteristics in students that will contribute to social welfare and progress, harmony and respect for others (skills, values, attitudes). Some education systems encourage individual independence and resilience while others promote obedience and compliance with the existing order. Trainees consider why they think this is so and the factors which may influence decisions made about curriculum content in various countries and systems. Trainees are introduced to the concepts of the remembered curriculum and the hidden curriculum to assist their analysis. Trainees then discuss who has formal responsibility (and authority) for making decisions about curriculum content. What happens when these decision-makers are out of touch with events going on in the world? How can changes be made in a curriculum to bring it up-to-date and make it relevant and motivating for young learners? **Key Discussion Questions:** 1. What constitutes the « curriculum », in its broadest sense, for students at schools? 2. In most large, state education systems, who makes decisions about formal curriculum content? 3. Who makes decisions about basic education	curriculum content in different education systems. • **1.2c:** Trainees can describe the formal process for decision-making about basic education curriculum content in Cambodia (MoEYS) • **1.2d:** Trainees can give examples of how the curriculum accommodates new knowledge and reflects changes taking place in the world.		- Explain the meaning of the concepts of the remembered and hidden curriculums . . . give examples of both in the recent history of education in Cambodia - How has the Cambodian (MoEYS) curriculum changed in recent years to accommodate changes taking place in the world? Give two examples and discuss the main reasons for making the changes made?

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
curriculum content in Cambodia (MoEYS)? What do you think are the main influences on their decision-making? 4. What do you think should be the main guiding factors in choosing what should be in the curriculum? 5. When curriculum change does occur, what are the main factors which cause it? **Hours: 4**			
Topic 1.3: Curriculum structure. In this module trainees analyze several different examples of education curricula to determine how they are structured. By sharing a number of comparative analyses, trainees develop their ability to identify common features of curricula, identifying and naming key components. This will provide them with a basic, working knowledge of curriculum frameworks and the terms commonly used in analysis. **Key Discussion Questions:** 1. How would you define and describe the differences between the following: a curriculum, a syllabus, a subject, a strand/theme, unit/module, lesson, a teacher guide, a lesson plan, a text book and a student work book?	• **1.3a:** Trainees learn and use a set of technical terms commonly used in discussing curriculum structure (e.g. curriculum, syllabus, aims, objectives, subject, strand/theme, teacher guide, lesson plan, supplementary material, text book, resource book, student work book) • **1.3b:** Trainees use technical language to explain what basic education curriculum documents are [officially] available at primary and	*Examples of Cambodian (MoEYS) curriculum documents* *Curriculum Framework in Khmer - Final Version* *Examples of curriculum documents from other countries*	• **Working in small groups of 3-4 trainees** read, discuss and analyze an example of a curriculum, prepare a 5-10-minute presentation on their example and deliver it to the class. • Based on in-class observations and interview with two teachers, **individual trainees research**, write and submit a brief (1-2 page) case study on each teachers' knowledge of the MoEYS curriculum materials for

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
2. Using common educational terms (see question above) what documents does the MoEYS make available for teachers and students to use in basic education in Cambodia? Are there any gaps? What do teachers most commonly use? **Hours: 4**	lower secondary schools in Cambodia and what documents are most commonly used by teachers. Trainees can make recommendations about ways in which more effective curriculum support could be provided to teachers.		their grade/subject, what training they received on them, how they use these materials, whether they use supplementary resources and if they have any recommendations for improving/updating the curriculum.
Topic 1.4: Curriculum and student learning outcomes. Trainees discuss common ways in which curricula set out learning goals/targets for students. These include the concepts of curriculum standards/minimum standards, criteria referencing and student competencies and outcomes. Trainees consider how these concepts are applied in Cambodia. [This topic will serve as background information for the coverage of assessment in Module 6 in this Stream] While "standards" have the advantages of clarity and simplicity, especially in reporting, they do not take into account individual student talents and abilities and tend to become lowest common denominator outcomes. Standards-based approaches may also influence teachers to take a narrow view of their role and demotivate students, especially those who are	• **1.4a:** Trainees can explain and give examples of different ways of describing student learning outcomes (e.g. standards, competencies,) • **1.4b:** Trainees can explain the advantages and drawbacks of the standards-based and competency/outcomes-based approaches to setting out student learning outcomes. • **1.4c:** Trainees can explain	http://www.ascd.org/publications/books/100043/chapters/Standards-Based_Curriculum_and_Assessment_Design.aspx Ronald C. Doll *Curriculum improvement* 8th edition p.143 https://en.wikipedia.org/wiki/Standards-based_education_reform_in_the_United_States https://en.wikipedia.org/wiki/Outcome-based_education#Flexibility *Other approaches of curriculum*	• **Trainees write a reflective paper** (1-2pp.) on their own experiences as students and teachers on the way the school curriculum influences the thinking of children and teachers learning outcomes. Did they experience or know some teachers whose practice was different to the majority (i.e. positively deviant)?

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
critical and/or creative thinkers. Student learning outcomes expressed as "competencies" focus on what learners can do or demonstrate rather than on simply what they remember to pass a test or exam. Using descriptive criteria to distinguish lower and higher order competencies ("criteria referencing") encourages both teachers and learners to focus on excellence, on being the best that they can be. **Key Discussion Questions:** 1. Why do some curricula include descriptions of "standards" or "minimum standards" for students to achieve? What are the advantages and disadvantages of such an approach? 2. In many occasions, it has been difficult to reach "minimum standards, even when they were very low. Can you find an explanation? Why do you think some schools (e.g. NGS) prefer talking about maximum standards? 3. What are the main differences between a standards-based curriculum and a student competency or outcomes-based approach? 4. What does criteria referencing mean in relation to student learning outcomes? In what ways is this different to setting a standard? **Hours: 4.5**	and produce their own examples of criteria which could be used to describe levels of students' learning achievement.	*design:* *https://www.thoughtco.com/curriculum-design-definition-4154176* *https://www.slideshare.net/1101989/standards-based-approach?next_slideshow=1* As examples: - Common European Framework of Reference for Languages - Abstracts from Singapore curriculum	

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Module 2: Thinking about Learning: How People Learn			
Topic 2.1: Introduction to Thinking Typologies: In this sub-topic, Trainees will learn about the evolution of thinking among psychologists and educators on the nature of learning and motivation. In this regard, psychological research and theory in the area of learning and motivation underwent a major change after the 1950s, one that would have important implications for the design of instruction. The shift that occurred was from a behavioral perspective on learning to a cognitive perspective and its successors in constructivist and personal responsibility models. This evolution in thinking about learning is important to understand because of the importance of Constructivist Learning (one of the later stages in this evolution among the Cognitivists) to New Generation School Reforms. Trainees will see how each learning model and typology has its strengths and weaknesses, requiring the educator to take a 'hybridized' approach to understanding how to analyze 'thinking.' That is, Trainees will understand that we have not abandoned earlier typologies of thinking as new theories have come along but that we have re-aligned our interpretations of what is going on in the classroom when learning takes place. **Key Discussion Questions:**	• **2.1a:** Trainees can describe the various typologies that have arisen to describe thinking from the Behaviorists in the 1950s to the Cognitivists in the later part of the 20th Century. • **2.1b:** Trainees can explain the implications for instruction and learning that resulted from each of the typologies of Thinking & Learning that arose during the 20th Century. • **2.1c:** Trainees can express a preference for a particular Learning Typology (e.g., Behavioral, Cognitivist, etc.) and justify this preference both in writing and in discussion.	*"New Directions in Learning & Motivation," in Teaching & Learning on the Edge of the Millennium: Building on What We Have Learned, by M.D. Svinicki (ed.) (1999)* (To be provided as a Handout) *39 Types of Thought Process* https://simplicable.com/new/thought-processes	• ***Individual Assignment:*** Trainees will write a short 2-page statement expressing a preference for a particular Learning Theory (e.g., behavioral, cognitivist, etc.) along with a justification that helps them to defend this preference. The justification of their preferences should describe how a particular theory works for them both in terms of how they would organize their teaching and lesson preparation using specific theoretical concepts (e.g., the behavioral concept that learning is strengthened through reinforcement) as well as how it helps them to understand how learning best occurs.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
1. Why do you think that various learning theories you have read about have arisen over the years? How do you think educators understood the 'learning process' before the advent of these theories? 2. The author of one of the readings for this topic urges educators to avoid subscribing entirely to any given theory but rather to have multiple interpretations of how learning occurs in the classroom. Why do you think it is a good idea to have multiple perspectives about how human beings learn rather than simply subscribing to one perspective? 3. Based on your understanding of different learning typologies, do you have any preferences for a any particular theory? How do you justify your preference? **Hours: 3**			
Topic 2.2: The Origins of Bloom's Taxonomy: Bloom's Taxonomy has been one of the most long-lasting devices used by educators to describe human thought. Many educational theories and ideas are often swept away after 10 or 20 years as new fads come and go; however, Bloom's Taxonomy has surprisingly been very resilient for over 70 years, though with some modification. Under this sub-topic, Trainees will learn	• **2.2a:** Trainees describe the key characteristics of Bloom's Taxonomy including its various levels of thinking, definitions of thinking skills at each level, and how each level builds on the below it.	*Bloom's Taxonomy: Its Evolution, Revision, and Use in the Field of Education,* by Mark Seaman (2011) (To be provided as a Handout) *How to Write Instructional Objectives, by Norman Gronlund (1991)* (To be provided as a Handout)	• ***Group Debate:*** The seminar will break into two groups of 5 to 6 Trainees to debate the following proposition: *The revisions made to Bloom's Taxonomy by Anderson constitute an important improvement to*

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
why Bloom and his associates first created the taxonomy, what its key characteristics are, and how it is has been slightly modified over the years. Discussions will focus on why the Taxonomy has been able to withstand the test of time and why it is has proven to be so useful to educators throughout the world. Trainees will also learn about the applications of the Taxonomy for lesson planning (e.g., developing educational objectives), curriculum development (e.g., ensuring a balance of thinking skills), and evaluation (e.g., the development of questions that assess multiple thinking skills). **Key Discussion Questions** 1. How widely is Bloom's Taxonomy used in Cambodia? Do you think that the Taxonomy can have wide applications in Cambodia? Why or why not? 2. Why do you think that Bloom's Taxonomy has proven so resilient over the last 70 years, especially given how much society has changed since the Taxonomy was first introduced? 3. How has the Taxonomy changed over the years? Do you think that these changes have actually improved the Taxonomy or not. Can you justify your answers? 4. Do you think that the changes introduced by	• **2.2b:** Trainees can explain why the Taxonomy has been so resilient over the years. • **2.2c:** Trainees can explain how the Taxonomy has changed over the last 70 years, particularly with respect to the modifications introduced by Anderson. • **2.2d:** Within the context of a debate, Trainees can justify a preference for the original Taxonomy developed by Bloom or the modified Taxonomy created by Anderson. • **2.2e:** Trainees can explain how the Taxonomy has facilitated various aspects of the education process including teaching, curriculum development, and assessment.		*the usefulness of the Taxonomy.* One group should provide arguments to support the merits of this statement while another group should argue that the original Taxonomy is stronger. Participants may choose the group that best matches their own views.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Anderson in the 1990s have actually improved the Taxonomy or do you prefer the original format that Bloom introduced? Can you justify your answers? **Hours: 3**			
Topic 2.3: Bloom's Taxonomy: Lower Order Thinking Skills: This subtopic will explore the Lower Orders of Thinking (Remembering, Understanding, & Applying) in Bloom's Taxonomy as a foundation to building more demanding skills at the higher levels. This includes reviewing practical definitions of each thinking skill (e.g., translating information from one form to another, interpretation, etc.) as well as practical applications of these definitions to the development of objectives and questions. Discussions under this topic will also emphasize various strategies to memorize information effectively in order to reduce the cognitive load that learners may experience in order to free students' minds for the higher orders of thinking (e.g., analysis, creativity, etc.). Specifically, trainees will learn various strategies to enhance long-term memory, such as mnemonic devices, spaced repetition, idea association, and games.	• **2.3a:** Trainees can define each of the thinking skills identified at the bottom of the Taxonomy (Remembering, Understanding, & Applying) using practical examples earlier discussed. • **2.3b:** Trainees can develop educational objectives and questions that reflect the various lower order thinking skills identified in Bloom's Taxonomy (i.e., Remembering, Understanding, Applying). • **2.3c:** Trainees can identify the kinds of information that are most suitable for	*How to Write Instructional Objectives, by Norman Gronlund (1991)* (To be provided as a Handout) *Anderson and Krathwohl – Bloom's Taxonomy Revised: Understanding the New Version of Bloom's Taxonomy* https://thesecondprinciple.com/teaching-essentials/beyond-bloom-cognitive-taxonomy-revised/ *Peter C. Brown, Henry L. Roediger III, Mark A. McDaniel - Make It Stick_ The Science of Successful Learning (2014, Belknap Press)* https://makeitstick.net/ https://youtu.be/sIv9rz2NTUk[1] (Learning styles don't exist) https://youtu.be/BCeGKxz3Q8Q [2]	• ***Group Work:*** Trainees will be asked to take particular textbooks and attempt to write educational objectives that exemplify Remembering, Understanding, and Applying based on the definitions provided in the readings. The work of Trainees will be reviewed in the large group with commentary provided by all seminar participants. • ***Performing Memory Experiments:*** Trainees will conduct a series of experiments about memory outside of class and draw conclusions. These

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[1] To explain why it is so important to automatize some skills. It also explains why we need to prepare the students to listen:

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Key Discussion Questions 1. How do thinking skills at the lower end of the Taxonomy reinforce and build on one another? Can you provide specific examples? 2. Based on your readings about the Taxonomy, how would you define Understanding as a thinking skill? Application as a thinking skill? Can you provide your own examples of activities that exemplify these skills? 3. How has Anderson sought to improve on the way that Bloom has defined the lower order thinking skills? 4. What kind of lessons should one memorize by heart? What kinds of lessons shouldn't one do so? 5. In what form should information be memorized? (e.g., lists, answers to short questions etc.) 6. How does memory support and complement other orders of thinking, such as understanding and creativity? 7. Which points in a lesson are the ones most suitable for memorization, relative to explanations or	memorization (e.g., facts, definitions, concepts, principles, etc.). • **2.3d:** Trainees can explain various learning strategies involving memorization both in terms of what should be memorized and how. • **2.3e:** Trainees can use similar strategies relating to memorization for collective and individual drill in the classroom.	https://www.youtube.com/watch?v=FfjKi_QP1nQ (also in this one) https://www.youtube.com/watch?v=JVt9_U9adRE https://www.youtube.com/watch?v=THJgaznSBu8	activities may either occur individually or in groups. During these activities, Trainees will practice various games to implement techniques of spaced repetition and association of ideas. Their experiences will then be discussed and reviewed among all seminar participants.

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discovery for instance? 8. How do we summarize the output of creative activities so that the students can memorize them? **Hours: 6 (practice and theory)**			
Topic 2.4: Bloom's Taxonomy: Higher Order Thinking Skills: This topic builds on the skills discussed earlier as part of the lower order thinking skills in Bloom's Taxonomy. Discussions under this topic will focus on the three higher order thinking skills identified in Bloom's Taxonomy including Analyzing, Synthesizing/Creating, and Evaluating. These discussions will review the specific definitions of each thinking skill in the upper levels of the Taxonomy and how they have changed with revisions introduced by Anderson in the late 1990s. Trainees will also experience practical exercises in which they must use the definitions and examples provided in their readings to the development of actual educational objectives and questions that exemplify each of the thinking skills identified at the higher end of the Taxonomy. Trainees will also have discussions about the practical limitations of the Taxonomy and particularly as these limitations relate to possible ambiguities that arise when a particular task or objective seems to exemplify more than one level in the Taxonomy.	• **2.4a:** Trainees can define each of the thinking skills identified at the top of the Taxonomy (Analyzing, Synthesizing/Creating, Evaluating) using practical examples earlier discussed. • **2.4b:** Trainees can explain the changes that have occurred to the Taxonomy with respect to higher order thinking skills under the revisions introduced by Anderson. • **2.4c:** Trainees can develop educational objectives and questions that reflect the various higher order thinking skills identified in Bloom's Taxonomy (i.e., Analyzing,	*How to Write Instructional Objectives,* by Norman Gronlund (1991) (To be provided as a Handout) *Anderson and Krathwohl – Bloom's Taxonomy Revised: Understanding the New Version of Bloom's Taxonomy* https://thesecondprinciple.com/teaching-essentials/beyond-bloom-cognitive-taxonomy-revised/	• ***Group Work:*** Trainees will be asked to take particular subject textbooks (according to their area of expertise) and attempt to write educational objectives that exemplify Analyzing, Synthesizing/Creating, and Evaluating based on the definitions provided in the readings. The work of Trainees will be reviewed in the large group with commentary provided by all seminar participants.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Key Discussion Questions: 1. How do thinking skills at the higher end of the Taxonomy reinforce and build on one another? Can you provide specific examples? 2. Based on your readings about the Taxonomy, can you define the key elements of Analyzing, Synthesizing, Creating, and Evaluating? 3. How has Anderson sought to improve on the way that Bloom has defined the higher order thinking skills? 4. How does one resolve ambiguities in classifying a particular task or objective when it seems that more than one level of the Taxonomy might apply (e.g., does a particular task reflect Analysis or Understanding; Isn't interpretation a form of Analysis, etc.)? **Hours: 4**	Synthesizing/Creating, & Evaluating).		
Topic 2.5: The Influence of Motivation on Learning: Using external rewards (such as grades) to motivate students is one of the most intrinsic aspects of 20th Century education systems and is a core precept of behavioral theory. Yet this basic view is now being	• **2.5a:** Trainees can explain the components of motivation by using them to investigate a difficult learning situation. • **2.5b:** Trainees can effectively debate both	Tirole, J. Rendall, S. (2017) 'Homo Incitatus: The Counterproductive Effects Of Rewards,' in *Economics for the Common Good*, Princeton University Press.	• ***Group Work:*** In groups, Trainees will brainstorm the identification of key factors of motivation and what can hinder it. They will then design pedagogical projects that

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increasingly questioned by 21st Century learning theorists because it fails to lead to 'internalized' motivation. Trainees will have the opportunity to explore the changing evolution of motivation theory and how this affects new conceptions of 21st Century education. In this respect, Trainees will better understand that curiosity is natural to children. However, it can be lost for many reasons, sometimes as a result of a bad learning environment. Providing good advice to restore motivation is difficult, because any good thing can harm it, if done in excess. This sub-topic will, therefore, train future mentors to analyze a classroom situation, diagnose what hinders student motivation, and propose adequate solutions to teachers. Discussions during class will help trainees find a good trade-off between the following factors: - Care and academic value - Exoticism and familiarity - Challenge and safety - Games and seriousness - Rewards and intrinsic satisfaction - Speed and comfort - Depth and breadth - Discipline and kindness - Freedom and guidance.	sides of the argument that external rewards such as grades are an efficient means to motivate students. • **2.5c:** Based on a review of existing motivation theory, Trainees can propose various kinds of activities to stimulate the interest of students with different learning styles and profiles.		are self-rewarding (i.e. rewarding without relying on grades) and then present these to the class. • ***Group Debate:*** The seminar will break into two groups of 5 to 6 Trainees to debate the following proposition: *External rewards such as grades are not an effective means to internally motivate students.* One group should provide arguments to support the merits of this statement while another group should take the opposite point of view that external rewards are inefficient with respect to motivation. Participants may choose the group that best matches their own views.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Key Discussion Questions: 1. Providing external rewards such as grades has been a key device in education systems to motivate students for decades. Yet 21st Century Education theorists have stated that such devices do not promote internalized motivation. What is your view on this contrast in opinions about how to best motivate students? 2. What are the effects of grades and scores on student motivation? 3. What are the effects of institutional requirements on student motivation? 4. How can one create a sense of purpose among students as a means to promote learning? 5. What are the effects of group work on motivation? Are these effects positive or negative? **Hours: 3**			

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Module 3: Promoting Critical Thinking in the Classroom			
Topic 3.1: Defining Terms as a Technique to Think Critically: Any effort to think critically begins with the need to understand the problem at hand and to define terms describing that problem. The words/terms in any language, however, often have multiple meanings that can only be understood by carefully reviewing the context in which they are used, a phenomenon known as 'polysemy,' which is defined as the 'association of one word with two or more distinct meanings.' The difficulties posed by polysemy are often overlooked, despite its consequences in both academic and pedagogical contexts. The dialogue with *Meno,* recorded by Plato, provides a good example of the challenges posed in a discussion when one tries to define the term, 'virtue,' which both Meno and Socrates conclude is indefinable. By helping Trainees to focus on vocabulary and the careful definition of terms, Trainees will learn how words can shape controversies and how good critical thinkers can resolve apparent contradictions. Trainees will also explore the implications of polysemy in misunderstandings. They will learn to explain how different definitions can lead to different answers. An apparent consensus can hide misunderstanding or even fundamental contradictions between the participants to a debate. This topic will	• **3.1a:** Trainees can explain the meaning of the term 'polysemy' and the role it plays in helping students to think critically. • **3.1b:** Trainees can summarize the main conclusions from the dialogue with *Meno* and how this relates to polysemy and the need to define one's terms carefully. • **3.1c:** Trainees can define controversial concepts and explain how different points of view can depend on how one defines one's terms. • **3.1d:** Trainees can make links between daily teaching practices and students' difficulties in thinking critically.	*Polysemy: Words and Meanings, in Thought Company.* https://www.thoughtco.com/polysemy-words-and-meanings-1691642 What is Ambiguity, Vagueness, and Polysemy? http://www.authorstream.com/Presentation/free2try-1249310-critical-thinking/ Plato, *Meno,* the definition of virtue	• ***Group Discussion:*** Present to the seminar the following situation: *A traditionalist and a modernist engage in a conversation in which they both seek to bring about 'good' teaching in their school. The discussion ends amiably but unbeknownst to the other, each person came away from the discussion with a completely different conception of what a 'good' classroom looks like.* Explain how you think the traditionalist envisioned a 'good' classroom. How did the modernist envision a 'good' classroom? If the conversation had continued, do you think that both educators could have found some common to achieve 'good' teaching

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
also serve a more direct pedagogical purpose, in explaining some of the misunderstandings and misinterpretations among students. **Key Discussion Questions:** 1. Can you give some examples of polysemy in Khmer? How might these terms lead to misunderstanding? 2. How can a teacher effectively use concepts relating to 'polysemy' to make sure that a student has understood the lesson? 3. What answer can a teacher give to a student who says: "I don't understand but I don't know why"? 4. How can a teacher effectively explain to a student that his/her mistaken response is not on the topic? 5. How should a teacher deal with opposite points of view? **Hours: 4**			at their school? Why or why not?
Topic 3.2: Techniques to Organize Content & Thought: As students progress through the school system, they encounter more and more difficult problems and information that they must organize and process. Under this topic, Trainees will learn about some of the scholastic traditions that require students to follow a specific format when writing essays or other examples of long written narratives. This topic is intended to help Trainees to look beyond the commonly suggested	• **3.2a:** Trainees can identify relevant strategies to explore and expose a problem (for essays and lectures). • **3.2b:** Trainees can explain how a given writing template can help people think, beyond the typical writing conventions that	*Critical Thinking in Reading and Composition, in Thought Company.* *https://www.thoughtco.com/what-is-critical-thinking-1689811* *Handout about the main conventional frames for essays and other non-fictional writings.*	• **Individually**, Trainees write down essay questions that could be used to promote critical thinking in the classroom. • They submit the questions to their classmates who propose the most relevant framework (with specific headings) to answer them.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
writing tips and conventions used in Cambodian classrooms, in order to see how those frameworks can scaffold or hinder critical thinking. That is, organizing one's ideas for an essay or a story should not be only a matter of rhetorical technique, but rather a way to increase one's critical understanding of a topic. This topic will, therefore, introduce Trainees to some of the main types of reasoning that may be useful for critical writing including: analytic, dialectic, thematic, chronological, and syllogistic reasoning. For further reflection, we'll take a look on conventional writings in various professional activities (laws, contracts, verdicts). **Key Discussion Questions:** 1. When should a teacher choose one organizational plan over another? What should the basis of his or her decision? 2. What if an organizational framework for a specific topic doesn't correspond to what the teacher thinks is most correct? What should the teacher do? 3. What if the organizational method for a topic becomes a hindrance to the thought process of the student? What should the teacher do if a student is stuck with the method proposed by the teacher? 4. What is the difference between academic papers and other writings, regarding those rules and	they learned in primary school.		• During a final discussion, the class compares the proposals with the expectations of the teacher who has written the question.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
conventions? 5. How many points should be attributed to the respect of conventions, when you grade an essay? **Hours: 4**			
Topic 3.3: Dialectical Approaches to Promoting Critical Thinking: Confronting different viewpoints has been proven to be an effective way to better understand the world and to create new ideas. But being open to debates (or writing dialectical essays) is not a skill that comes naturally. Such skills need to be learned through practicing specific procedures, rules and specific exercises. Under this topic, trainees will practice the classical exercise of *disputatio,* as a means to develop their minds critically and to handle difficult questions that can be asked in the classroom. Trainees will also learn how to organize and conduct debates effectively for better learning. **Key Discussion Questions:** 1. What skills are developed during debates? 2. How can a teacher make a lesson on a controversial topic? 3. How should we prepare students to perform? 4. How should one assess oral performance during a debate? 5. How do we organize the class for better listening of the performance? 6. What should be the rules for a serene discussion,	• **3.3a:** Trainees can defend a point of view, while listening to the opposite side. • **3.3b:** Trainees develop their oral performance and body language to argue a debate effectively.	Plato, *Apology*, 19e-21e (oracle) *The Coddling of the American Mind,* (Chapter 4, Intimidation and Violence), (especially: Why It Is Such a Bad Idea to Tell Students That Words Are Violence), by Greg Lukianoff and Jonathan Haid.	**Diputatio:** Trainees practice disputatio on provocative pedagogical such as: - Should we cut down educational expenses? - Should we suppress marks and scores in primary school? - Should we serve vegan food in the canteen? Trainees are assigned randomly to defend a specific point of view, which means that they might have to become the devil's advocate and consider opinions that are not theirs. Meanwhile, the rest of the class assesses their performance along their logical and rhetorical dimensions.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
when we disagree on serious matters? **Hours: 4**			
Topic 3.4: How to think critically and collaboratively at the same time? Discussions often end up in sterile confrontations, but good discussions begin with good questions. *De Bono's thinking hats* is a comprehensive technique to explore the components of a problem: • The objectives, • The feelings of the participants, • The facts, • The advantages, • The dangers, • The opportunities and creative solutions. It's a good technique to promote parallel thinking, i.e. trying to find a consensual and effective solution to a problem. **Key Discussion Questions:** 1. How can we unlock a difficult debate? 2. In which order should the participants speak? 3. In which order should we put the hats? 4. How much time should we give to the participants to prepare their ideas? 5. How can we use de Bono's technique to teach problem-solving skills? **Hours: 4**	• **3.4a:** Trainees can explain de Bono's technique to organize a group discussion. • **3.4b:** They can apply this inquiry technique to lessons or other problems in the school.	*Video: presentation of the technique by de Bono.*	• In small groups, Trainees use de Bono's technique to try and solve practical problems that can arise in schools, such as: - How can we clean Cambodian schools? - How to deal with students who come late in the morning? - How to increase food safety during lunch in Cambodian schools?

141

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Module 4: Thinking about Teaching : Methodologies and the Role of the Teacher			
Topic 4.1: General Introduction to Styles of Teaching (pedagogy/teaching methodology): In this introduction to Module 2 trainees consider teaching (pedagogy and andragogy/teaching methodology) in broad terms from a historical/traditional perspective, in terms of their own experiences as learners and teachers and in light of the "information revolution" of the past 20-30 years. Trainees will identify approaches to teaching and learning which can be broadly classified as teacher-centered and learner-centered, examples of these in historical and contemporary settings and in their own experiences and what the benefits of these two approaches might be. Trainees will also discuss the significance of developments in information technology in the past 20-30 years, how these are influencing pedagogical practice in Cambodia and the region and the implications for teaching and learning in the future. **Key Discussion Questions:** 1. "The teacher should always know more than his/her students" – is this true? Is it important? AND Do you think it is acceptable for a teacher to answer "I don't know" to a question from a	• **4.1a:** Trainees can give examples of different styles of teaching/teacher roles and explain why teachers might decide to use them at particular times. • **4.2b:** Trainees can explain why many teachers decide to use learner-centered methods of teaching and key developments in the recording, storage and retrieval of information which have made self-directed learning commonplace both in and out of school in much of the world.	*Jacques Delors, UNESCO Report, Education for the 21st century, pp. 11-33 – 4 pillars – life long learning* *Potted descriptions of views of prominent educators on alternative methods: e.g. Rousseau, Pestalozzi; Piaget; Dewey, Vygotsky*	• A relatively brief, introductory Topic/session so probably no need for a specific written assignment – ideas covered in this topic should be referenced in the Case Study based on interviews with children (see below. Topic 2.4)

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
student? Discuss (with particular reference to IT!) 2. Do you think teachers need to adjust their style according to the age and experience of learners? Why might they do this? 3. Is a teacher-centered style appropriate in a 21st century classroom? 4. Do you think there is more opportunity for self-directed learning in the 21st century than ever before? Give reasons for your opinion. **Hours: 2**			
Topic 4.2: Didactic Methods: Most traditional approaches fall into this category. Direct instruction is often preferred by teachers because it provides them with a sense of control. The fear of losing that asset prevents a lot of them from trying other strategies. Direct instruction is also irreplaceable as a part of many lessons, when other approaches are too time-consuming or complicated. However, teachers should be aware of the limitations of the method, especially in terms of motivation and outcomes. In this topic, Trainees will consider how to make lectures and other teacher-centered activities more interesting and effective. Trainees will also see how this approach can harmonize with more children-centered strategies. **Key Discussion Questions:**	• **4.2a:** Trainees can explain the drawbacks of direct instruction and propose ways to mitigate them. • **4.2b:** They can use various strategies to explain difficult concepts.	*Effective teaching strategies*, by Roy Killen (Chapter 5: *Using direct instruction as a teaching strategy)* *https://medium.com/the-art-of-keynoting/the-20-minute-rule-for-great-public-speaking-on-attention-spans-and-keeping-focus-7370cf06b636*	To improve the efficiency of their lessons, the trainees do two exercises: • Summary of reading material, to keep explanations under a given amount of time (3 minutes). • Identification and explanation of key concept, under a given amount of time.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
1. What kind of information should a teacher tell students directly? 2. How can a teacher ensure clear and solid understanding of major concepts? 3. How should a teacher present the material to avoid boredom during a lecture? 4. How long should a teacher spend on explanation and on exercises? 5. How ICT can supplement lecture-style lessons? 6. How can a teacher assess the outcomes of direct instruction besides the repetition of the content? 7. How can a teacher improve the clarity of his/her explanations? **Hours: 3**			
Topic 4.3: Alternatives to Didactic Methods: Trainees will discuss and reflect upon alternative (to direct instruction) pedagogical practices commonly used in formal education and the role of the teacher in supporting students' learning processes. The alternative methods include: • Problem posing – problem solving • Inquiry-based learning • Learning by doing • Self-directed learning • Project/assignment method (involving student research)	• **4.3a:** Trainees can give examples of pedagogical alternatives to didactic methods commonly used by teachers and explain the benefits of such methods. • **4.3b:** Trainees can give examples of the way teachers work to support student-directed learning	*Effective teaching strategies*, by Roy Killen, chapters 9 and 10	• Trainees choose one of the common non-didactic teaching methods, research it and summarize it in a 3-minute presentation to peers. • After reviewing and critiquing some examples of alternatives to the didactic approach, trainees select a topic in a subject of

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Trainees will discuss the most effective ways in which the teacher as facilitator and/or guide can support the progress of students. These might include, for example, periodic conferencing with individuals/small groups and providing feedback and/or "scaffolding", organizing the sharing of experiences on progress and presenting results at the end of the process. Trainees will compare the role of the teacher in direct instruction (in a didactic role) and in more learner-centred alternative pedagogies and reflect on the teaching skills involved. **Key Discussion Questions:** 1. What are the main differences between direct instruction and alternative, student-directed learning in terms of the roles of teachers and students? 2. What do you understand to be the differences between content and process in relation to teaching and learning? 3. In learning which is truly student-directed, what is the role of the teacher? 4. Do you think teachers need to be more thoroughly prepared for direct instruction or for using alternative, more student-centered methods? Give reasons for your opinion. **Hours: 10**	processes. • **4.3c:** Trainees can explain what educators mean when they talk about the difference between content and process in education		interest and outline a short sequence of three or four lesson outlines, in which a teacher might ask his/her student to explore the chosen topic using one of the common alternative pedagogical approaches. The lesson outlines should include the main learning activities and describe how the teacher would supporting the learning progress of students. At the end of the lesson sequence, trainees will explain, in up to a page, why they chose the particular methodology

145

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Module 5: Teaching and Learning for the 21st Century			
Topic 5.1: Educational Needs for Living in the New Century: This topic traces the evolution of the modern school system in the West, which during the early 20th Century adopted the organizational principles of Taylorism. Taylorism refers to principles of modern industrial organization in which schools came to look like 'learning factories' with fixed schedules, curricular standardization, and a strong focus on conformity and compliance. Through its contact with French colonizers, the Cambodian education system has been deeply influenced by Taylorism, as evidenced by its standardized curricula, building designs, uniforms, and evaluation system as well as its strong emphasis on compliance and conformity. During discussions on this topic, Trainees will better understand how we define 20th Century Education in terms of Taylorist principles and how this contrasts with the needs of the 21st Century economy with its emphasis on collaboration, dynamism, individualized learning, non-conformity, non-standardization, and creativity. Since it is estimated that over a third of the jobs of the future do not even exist as yet, a flexible education system will be needed to prepare young workers for a rapidly changing economy. However, as Cambodia starts the third decade of the new century,	• **5.1a:** Trainees can define the 20th and 21st Century education models in terms of Taylorist principles and the recent counter reaction to such principles. • **5.1b:** Trainees can compare and contrast the differences between education models in the 20th and 21st Century. • **5.1c:** Trainees can explain what economic and social changes in the 21st Century have made a 20th Century education model obsolete. • **5.1d:** Trainees can make determinations about if or whether Cambodia should transition to a 21st Century education system and what implications this would have for curriculum, teaching, and	Taylorism: World Report (Short YoutTube Documentary on Taylorism) *https://www.youtube.com/watch?v=CCsOqWbK46o&frags=pl%2Cwn* The Taylorist Classroom *https://lordsofbotetourt.wordpress.com/2013/05/08/the-taylorist-classroom/* Education in the 21st Century *https://thinkstrategicforschools.com/education-21st-century/* What is 21st Century Education? (A short YouTube Presentation) *https://www.youtube.com/watch?v=Ax5cNlutAys* TED Talk: Skills Every Child Will Need to Succeed in 21st Century, by | Dr. Laura A. Jana *https://www.youtube.com/watch?v*	• **Group Debate:** The seminar will break into two groups of 5 to 6 Trainees to debate the following proposition: *The 1960s were a golden age of education in Cambodia and the country should seek to return to such an era.* One group should provide arguments to support the merits of this statement while another group should argue that 1960s provide an irrelevant educational model for Cambodia's future in the 21st Century. Participants may choose the group that best matches their own views. • **Individualized Assignment:** Trainees should write a short one or two page critique of the following statement in

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
its school system still very much resembles a highly conformist 20th Century model. Indeed, many Cambodian educators look back to the 1960s as the goal to which Cambodian education should strive. Discussions under this topic will, therefore, examine 'whether' or 'if' Cambodia will ever be able to transition to a 21st Century public education model and whether this is really what Cambodia needs and wants. **Key Discussion Questions:** 1. What has changed in the 21st Century to make Taylorism a less relevant educational model for many countries? 2. Many Cambodian educators still look back to the 1960s as the 'golden age' of Cambodia's education system and an age to which Cambodia should return. Do you agree with this idea or not? Why or why not? 3. Why does the concept of 'standardization' have little place in 21st Century education? What practical problems might arise in managing a school when it moves away from standardization? 4. Do you think most of Cambodia's rural schools will ever be able to transition to a 21st Century education model? Why or why not? 5. Taylorist principles are probably highly relevant for Cambodia's current economy in which non-automated factories are becoming increasingly	assessment.	=z_1Zv_ECy0g&frags=wn Modifying Bloom's Taxonomy to Meet 21st Century Pedagogies, Joanne Gonzalez http://www.dartmouth.edu/~jmajor/DesignProjects/Publications/digitalTaxonomy.pdf	which they voice their support or disagreement: *In his book 'Who's Afraid of the Big Bad Dragon?', educational thought leader Yong Zhao warns, "National standards and national curriculum, enforced by high-stakes testing, can at best teach students what is prescribed… As a result, students talented in other areas never have the opportunity to discover those talents. Students with broader interests are discouraged, not rewarded. The system results in a population with similar skills in a narrow spectrum of talents. But especially in today's society, innovation and creativity are needed in many areas, some as yet undiscovered."*

147

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
common. But what will happen if most workers are replaced by robots and how can a 21st Century education model help the population to transition to new modes of production? **Hours: 4**			
Topic 5.2: Cooperative Learning: Theory and Practice: Although Cooperative Learning was first elaborated as a distinct teaching methodology by Robert Slavin since the 1970s, its principles are eminently suited to 21st Century Education because of its focus on collaboration, cooperation, teamwork, and group problem-solving. Under this topic, trainees will explore the theoretical underpinnings of Cooperative Learning including key organizing principles such as (i) Positive Interdependence; (ii) Collaborative Skills; (iii) Processing Group Interaction; (iv) Heterogeneous Ability Groupings; and (v) Individual Accountability. Trainees will also have exposure to specially made videos designed for the Cambodian context that help to exemplify Cooperative Learning techniques at different grade levels (i.e., Grades 2, 6, and 8). The assigned readings also provide concrete training exercises that are to be used to train other teachers. Trainees will do these exercises themselves to give them a more concrete idea of how to apply theoretical principles in Cooperative Learning to practical aspects of teaching	• **5.2a:** Trainees can define the key organizing principles underlying Cooperative Learning (e.g., Positive Interdependence, Heterogeneous Ability Groupings, etc.). • **5.2b:** Trainees can discern specific examples of important organizing principles from a video of a classroom lesson that they review. • **5.2c:** Trainees can determine some of the dangers of implementing Cooperative Learning incorrectly. • **5.2d:** Trainees can make actual applications of Cooperative Learning	*Cooperative Learning Manual: Theory & Practice (KAPE)* http://www.kapekh.org/files/report_file/38-en.pdf	• ***Group Work:*** View a video that comes along with the *Cooperative Learning Manual* assigned reading. After viewing the video, work in small groups to find examples of each of the organizing principles identified in the Manual such as Positive Interdependence, Collaborative Skills, etc. (see Training Activity 4). Then compare notes with other groups through large group presentations. Resolve differences in observations, as needed.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
including lesson planning and delivery. **Key Discussion Questions:** 1. *'Cooperative Learning requires group work but group work is not necessarily Cooperative Learning.'* What do you think this paradoxical statement means? 2. What are some of the factors that would facilitate the effective use of Cooperative Learning in classrooms? What are some of the factors that undermine the use of Cooperative Learning in the classroom? 3. Many teachers feel that Cooperative Learning is more appropriate for students at primary grade level but less relevant for students at the secondary school level. Do you agree with this view? Why or why not? 4. What are the dangers of organizing children into groups but then teaching in a more teacher-centered way? 5. Can Cooperative Learning be used as a technique to advance morality and compassion among students? Why do you think so? **Hours: 6**	Principles to practical contexts such as lesson planning and delivery. • **5.2e:** Trainees can justify the view that Cooperative Learning is an appropriate teaching technique for the 21st Century classroom.		
Topic 5.3: Constructivist Learning: Although Constructivism as a learning methodology has been in existence since the mid-20th Century, its	• **5.3a:** Trainees can define Constructivist Learning and the key principles that underlie it.	*Constructivist Learning Manual (KAPE)* http://kapekh.org/en/publications-	• *Individual Assignment:* Using the principles that are explained in the Constructivist Learning

149

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
popularity has increased dramatically in the 21st Century with the proliferation of technology, which facilitates the creation of new knowledge products (e.g., PowerPoint Presentations, Google Searches, etc.). Under this topic, Trainees will, therefore, explore the key principles underlying Constructivism including (i) Self-directed Learning; (ii) Building on Previous Knowledge & Experiences; (iii) Reflection to Create New Concepts; and (iv) Collaborative Exchange of Ideas. New Generation Schools are particularly well suited to provide the institutional requirements to facilitate Constructivist Learning with their focus on flexible curricula, more time for study, and widespread access to technology. In addition, because of its focus on collaborative student creation of new concepts, Trainees will better understand that Constructivism fits well with 21st Century educational needs such as collaborative learning, non-standardized curricula, intensive use of technology, and more self-directed learning. Trainees will also learn that Constructivism is a very broad theory that takes in many related concepts. While the central feature of the approach is all about the ability of students to manipulate and create new concepts, there are many related elements of the approach that include critical thinking, problem-solving, the need for collaborative learning, and intensive use of technology amongst many others.	• **5.3b:** Trainees can identify the institutional requirements that are needed to facilitate effective implementation of Constructivist Learning in a school. • **5.3c:** Trainees can demonstrate that they understand how to use concrete activities through which to implement Constructivist Learning Principles. • **5.3d:** Trainees can explain how we resolve the tension between open-ended learning tasks that Constructivist Learning promotes and the needs to assess students' knowledge through standardized assessment. • **5.3e:** Trainees can explain how to organize the institutional context at a school to promote	media/26/	Manual, each trainee will develop a 2-hour lesson plan that plans out the delivery of a particular topic using Constructivist Learning Principles. The Instructor may also opt to take the best examples of these lesson plans and present them to the class for review and discussion.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Constructivist learning also subsumes several other teaching methods with similar goals such as Problem-based learning, Discovery Learning, and Inquiry-based approaches. Thus, Trainees will better understand that Constructivism is a very eclectic theory of learning that takes in several other methods of teaching. **Key Discussion Questions:** 1. Constructivist Learning first came into existence in the 1950s. Why do you think it is so popular again in the 21st Century? 2. Constructivism has been described as a very 'eclectic' theory of learning that takes in many related methods (e.g., Problem-based Learning, Discovery Learning, etc.). Why do you suppose that this might be both an advantage as well as a disadvantage? 3. Based on your understanding of educational needs for the 21st Century discussed in Topic 4.1, in what ways do you see that Constructivist Learning is relevant to those needs? 4. How has technology enhanced the efficiency of Constructivist Learning in the classroom? 5. Is Constructivist Learning more relevant to some subjects than others? Can you elaborate why you think this may or may not be the case? 6. What do you see as some of the key challenges to	Constructivist Learning.		

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
using Constructivist Learning in the classroom? How can these challenges be resolved? 7. Why are New Generation Schools more suitable places to implement Constructivist Learning whereas other public schools are less well suited? Do you think that Constructivism can be implemented in non-NGS sites? Why or why not? **Hours: 5**			

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Module 6: Understanding School Change in terms of Culture and Systems-based Approaches			
Topic 6.1: Using Systems-based Approaches to Understand Educational Change: In this topic, Trainees will become familiar with the concepts used to better understand how educational change in a school occurs from a 'systemic' point of view. Using a systems approach, one can better understand how an education system or school works by examining its elements and subsystems as well as the relationships and synergies between them. Subsystems within a school might include a Teacher Support Framework, a School Library, the Technology Infrastructure within a school, etc. One of the reasons that educational reforms often fail is that they focus on only one subsystem (e.g., Libraries) within the school and ignore the others, which may undermine one's interventions due to sub-systemic interdependence. Using a systems-based approach will help mentors to better understand the interdependence between the various subsystems in a school that affect one another. For example, if one introduces a teaching methodology that requires considerable research activity among students, one had also better make sure that libraries are working, internet systems are in place, etc. System-wide reforms such as those undertaken in the context of New Generation Schools have been more successful for the very reason that they have taken a system-wide	• **6.1a:** Trainees can correctly define the terms used to describe a system (e.g., sub-system, element, open system, closed system, etc.). • **6.1b:** Trainees can use the concept of 'paradigmatic failure' to explain why educational reforms in Cambodia have often failed. • **6.1c:** Trainees can explain how Cambodian schools must change in systemic terms to accommodate such 21st Century learning trends as 'Participatory Creativity.' • **6.1d:** Trainees can map or diagram a New Generation School in systemic terms using concepts discussed in the assigned readings.	*How Systems Thinking Applies to Education,* by Frank Betts (1992) http://www.ascd.org/publications/educational-leadership/nov92/vol50/num03/How-Systems-Thinking-Applies-to-Education.aspx *Expanding Opportunities for Creative Participation: A Systems-based Approach to Creativity and Creative Problem Solving in Education,* by Clapp, E.P., et al. (2017) (To be provided as a Handout)	• ***Group Work:*** Small groups of Trainees will work together to develop a flowchart or diagrammatic map that describes a New Generation School in 'systemic' terms using many of the concepts developed in the assigned readings. During the exercise (which should be done outside of class), groups must identify sub-systems within the school and determine their relationship with one another including a description of synergies and how they affect one another. When completed, each group will present its map or diagram to the seminar and justify its analysis. Seminar groups will critique each other's analysis and give

153

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
approach to effecting change. As part of the discussions under this topic, Trainees will be expected to map out the subsystems within a New Generation School as well as determine how they relate and reinforce one another. They will also be expected to clearly explain the implications of social and economic change in the 21st Century for schools in 'systemic' terms. For example, the need for greater creativity in school systems has led to concepts of 'Creative Participation' and the need for education systems to move from more 'dictatorial/deterministic' orientations to more 'participative' ones. Such changes are more easily understood using a systems-based approach to describe and explain them. **Key Discussion Questions:** 1. What are some of the key subsystems in a New Generation School? In a Normal School? 2. Can you give some examples of 'paradigmatic failure' in Cambodia's education system? Please explain. 3. In one of the articles that you read, Creativity is defined as a 'collaborative' process rather than an 'individualized' process as is traditionally thought. Do you agree or disagree with this idea? 4. What changes would need to happen in a school in order to bring about 'creative participation'? Do you think that such changes are possible in a			constructive feedback to one another.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Cambodian school? Why or why not? 5. Do you agree with the suggestion that Cambodian schools have a dictatorial or deterministic orientation? 6. What changes would need to happen in a school in order to bring about a more 'participative' system of operation? Do you think that such changes are possible in a Cambodian school? Why or why not? **Hours: 6**			
Topic 6.2: School Cultures that Emphasize Collaboration and Competition: The culture of a school will often determine the degree to which positive change can occur there. The nature of a school's culture, therefore, often determines whether investments by Ministry and other donors will be effective or not. Thus, concepts involving 'school culture' can also help to explain how and why schools may or may not change in the same way that earlier discussions about 'systems' help to explain how schools change. In discussions on the topic of school culture, Trainees will better understand how to define a school culture and whether that culture is 'toxic' or 'positive'. They will also understand concepts relating to a school's leadership culture such as 'distributed leadership,' 'shared decision-making,' and 're-	• **6.2a:** Trainees can define the key elements of a school culture. • **6.2b:** Trainees can explain key terms such as 're-culturing,' 'distributed management,' and other terms relating to school culture in the context of fostering positive school change. • **6.2c:** Trainees can describe when a school's culture is toxic or positive. • **6.2d:** Trainees can explain	*Is Your School's Culture Toxic or Positive?* In Education World *https://www.educationworld.com/a_admin/admin/admin275.shtml* *Establishing a Collaborative School Culture through Comprehensive School Reform* by Waldron, N.L. et al. (2010) in Journal of Educational & Psychological Consultation. *https://education.ufl.edu/disability-policy-practice/files/2012/05/Waldron-McLeskey-2010-JEPC-Collaboration-9.pdf* *Competitive Classrooms versus*	• ***Group Debate:*** The seminar will break into two groups of 5 to 6 Trainees to debate the following proposition: *Schools without a competitive culture cannot be effective.* One group should provide arguments to support the merits of this statement while another group should argue that collaborative systems both among students and teachers are more effective, particularly

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
culturing.' Trainees will find that in many cases, the issues surrounding the nature of a school's culture often revolve around two kinds of orientation, namely 'collaborative' cultural orientations and 'competitive' ones. Collaboration and competition can describe not only how students learn in a school but also how school staff work together. Trainees will learn that the increased value placed on collaboration in the 21st Century economy is also pushing a shift in school cultures worldwide towards more collaborative orientations, which opens the door to faster change. Nevertheless, many schools continue to cling to a more competitive orientation, as evidenced by some of the assigned readings under this topic (e.g., Exam Schools). Trainees will, therefore, be expected to debate the merits of collaborative and competitive cultural orientations in a school and how this relates to the modern economy. **Key Discussion Questions:** 1. What factors in Cambodian schools contribute to a toxic school culture? What factors contribute to a positive culture? 2. Some of the documents read under this topic advocated moving away from centralized school cultures to more collaborative school cultures. Do you think that such an idea is in conflict with	the difference between 're-culturing' and 'restructuring' as strategies to bring about change in a school's effectiveness. • **6.2e:** Trainees can describe the key differences between a collaborative and competitive school culture and the implications each has for positive school change. • **6.2f:** Trainees can explain how collaborative cultural orientations can facilitate positive school change and how this links with the needs of education in the 21st Century. • **6.2g:** Trainees can effectively debate the merits and demerits of competitive and collaborative school	*Cooperative Classroom: Pros and Cons* *https://education.cu-portland.edu/blog/classroom-resources/competitive-classrooms-vs-cooperative-classrooms-pros-and-cons/* *Cooperation versus Competition in Classrooms* by Nina Smith (in The Educator's Room) *https://theeducatorsroom.com/cooperation-vs-competition-in-classrooms/* *Exam Schools: Inside America's Most Selective Public High Schools (Chapter 16: Dilemmas & Challenges)* by Finn, C.E. et al (2012) (To be provided as a Handout)	with respect to the needs of the new 21st Century economy. Participants may choose the group that best matches their own views. • **Individual Writing Assignment:** Think of your former high school and write a short analysis of the school culture that existed there using some of the concepts about school culture that you have studied under this topic. Your analysis should be about 2 to 3 pages in length. Be sure to describe the effects of the school culture on the relationship between students as well as between teachers.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Cambodian culture? Why or why not? 3. What is the difference between 're-culturing' and 'restructuring'? Why is the latter considered to be less effective? 4. Do you think that eliminating competition between teachers and teachers and students and students is a desirable end? Do you think it is a possible goal in Cambodian schools? 5. What is the difference between traditional and constructivist forms of professional development aimed at achieving positive changes in a school? Why are traditional forms of professional development thought to be less effective? Which of these forms of professional development is most common in Cambodia and how effective has it been? 6. What kind of school culture do 'rien kua' practices contribute to (competitive or collaborative)? Why is this a problem for implementing effective professional development as a mentor is expected to do? **Hours: 7**	cultures.		

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Module 7: Principles of Student Assessment			
Topic 7.1: The Purpose and Kinds of Evaluation: A study of Evaluation must always start with an examination of one's purpose in assessing students and discussions under this topic are no different. Misunderstanding one's purpose in evaluating can adversely affect the design and administration of testing instruments, something that occurs frequently in classrooms. Initial discussions under this topic will, therefore, help Trainees to examine the kinds of information that evaluation activities can generate and how this information should relate to the decisions that need to be made. Indeed, the decisions one wants to make sheds light on one's purpose in evaluating. Trainees will also learn that the decisions made on the basis of information generated by evaluation can take many forms such as promotion decisions, certificatory decisions, selection decisions, placement decisions, and decisions relating to lesson review and re-teaching, among others. Through these discussions, Trainees will then better understand the diversity of decisions that may underlie one's purpose in evaluating and the importance of correctly matching the data generated with the decisions to be made (e.g., norm-referenced data should not be used for certification decisions, terminal data should not be used for re-teaching decisions, etc.). This understanding will then naturally	• **7.1a:** Trainees can explain why it is so important to start with a clear understanding of one's purpose in evaluating before starting to do so. • **7.1b:** Trainees can explain how different types of evaluation differ in terms of the decision-making purpose that each one implies (e.g., promotional decisions, placement decisions, etc.). • **7.1c:** Trainees can give examples of the problems that might arise if the testing instrument developed does not match the purpose for which it is intended. • **7.1d:** Trainees can match the various characteristics of an assessment (e.g., length, frequency,	*How to Construct Achievement Tests,* by Norman Gronlund, Needham Heights, MA: Simon & Schuster (1991) (Chapter 1) To be provided as a Hard Copy *Better Learning Through Structured Teaching: A Framework for the Gradual Release of Responsibility,* by Douglas Fisher & Nancy Frey, (2008, ASCD) p.107. To be provided as a Handout https://www.thoughtco.com/ideas-for-performance-based-activities-7686	• ***Individual Writing Assignment:*** Based on your knowledge of the Cambodian education system, choose an example of commonly undertaken assessment (e.g., Bac II Exam, Monthly Test, etc.) and make a short one to two-page critique about whether the ostensible use of the information (i.e., promotion, placement, certification, etc.) is consistent with how the testing instruments have been designed and implemented. In your critique, be sure to make suggestions for how the testing instrument could be made more consistent with the purpose for which it has been intended. The instructor may use some of the critiques written by

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
lead into a discussion of the types of evaluation recognized by educators and how each one differs based on the decision-making purpose that each implies. Important kinds of evaluation discussed in this regard will include (i) Summative Evaluation; (ii) Formative Evaluation; (iii) Diagnostic Evaluation; and (iv) Placement Evaluation. In discussing the various types of evaluation, Trainees will attain a better understanding of how assessment instruments might vary in form (e.g., length, frequency, types of questions used, etc.) based on the purpose for which they are intended. Such discussions will also include a review of how the information generated by different assessment instruments is expressed and interpreted (e.g., criterion-referenced scoring, norm-referenced scoring). **Key Discussion Questions:** 1. Do you think most Cambodian teachers examine their purpose in evaluating students before doing so or not? Why or why not? 2. How do you think that Summative Assessment Instruments should differ from Formative ones? 3. What difficulties might arise if one uses information generated by an assessment that does not match its purpose? Give specific examples? 4. How would you classify the various types of evaluation undertaken in the Cambodian education system such as Monthly Tests, Semester Tests, Bac	question types used, scoring system, etc.) with the kind of evaluation for which it is best suited. • **7.1e:** Trainees can explain how criterion and norm-referenced scoring differ and what types of evaluation each is best used with.		Trainees to stimulate a large group discussion about some of the issues raised.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
II Exam, etc.? Do you think that the form of these tests matches the purpose (i.e., the decisions to be made) for which they are intended? Why/Why not? 5. In what circumstances should an assessment instrument be norm-referenced? Criterion-referenced? Why do you think it is a bad idea to use a norm-referenced test for a certification decision? Why is it a bad decision to use a test with a formative purpose for a promotion decision? **Hours: 2**			
Topic 7.2: Test Design and Planning: Under this topic, Trainees will become familiar with techniques used to construct tests and quizzes in a way that is consistent with the purpose of the evaluation. Key steps that Trainees will review in this process incudes (i) Determining the purpose of the test; (ii) Identifying and defining the learning outcomes or objectives; (iii) Preparing a test plan by using a Table of Specifications; and (iv) Constructing relevant test items using multiple formats that are consistent with the test purpose (e.g., Short Answer, Matching, Multiple Choice, Essays, etc.). During the process of reviewing these steps, Trainees will encounter activities where they must use Bloom's Taxonomy to develop learning objectives, organize the objectives (and intended questions for each) in a Table of Specifications that	• **7.2a:** Trainees can describe the necessary steps needed to develop an effective testing instrument. • **7.2b:** Trainees can develop learning objectives that are consistent with guidelines commonly used in their development. • **7.2c:** Trainees can take a unit of content from a state textbook and effectively develop a set of	*How to Construct Achievement Tests,* by Norman Gronlund, Needham Heights, MA: Simon & Schuster (1991) (Chapters 2 to 7) To be provided as a Hard Copy	• ***Group Work:*** In small groups, Trainees will review a copy of a previously administered Bac II Examination and develop a critique of the test (either positive or negative) and how it might be improved. The critique should be presented to the whole class for general discussion. • ***Group Debate:*** The seminar will break into two groups of 5 to 6 Trainees to debate the following

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
helps teachers to organize course content and required thinking skills (e.g., Remembering, Understanding, etc.), and develop test questions of a variety of formats that are consistent with the purpose of the test. Trainees will also debate the merits and demerits of using 'selection-type' test items (e.g., True-False, Multiple Choice, etc.) versus 'supply-type' items (e.g., extended and restricted response essays) and the circumstances where each are most recommended. **Key Discussion Questions:** 1. What sorts of problems can the use of a Table of Specifications prevent? 2. Why do you think it is suggested to express learning objectives as observable behaviors and what relationship does this have with how they are evaluated? 3. Do you think most teachers in Cambodia use Tables of Specification to plan their tests? Why or why not? 4. What sorts of content and skills are 'selection-type' questions most appropriate for? What about 'supply type' questions? Please explain your answer. 5. There is a long-held view that 'selection-type' questions are not effective in assessing the higher order thinking skills (e.g., application, analysis,	learning objectives based on the unit, a Table of Specifications to assess the objectives, and an actual test based on the Table of Specifications. • **7.2d:** Trainees can logically debate the merits and demerits of using questions of varying formats in a test. • **7.2e:** Trainees can critique tests that they encounter using some of the test development principles that they have studied during the course.		proposition: *Selection-type questions are not effective in assessing the higher order thinking skills.* One group should provide arguments to support the merits of this statement while another group should argue that selection-type questions, depending on which ones, are highly versatile in the thinking skills that they can assess. Participants may choose the group that best matches their own views. • ***Developing a Model Test Paper:*** In pairs, Trainees will be asked to develop a Model Test Paper (in Khmer) on a subject where they have expertise (e.g., Chemistry, Physics, Maths, etc.) and for any grade that they like. The Model Test Paper should have at least

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
etc.). Do you agree with this viewpoint? Why or why not? 6. Based on your knowledge of the *Bac II Examination,* do you think that the questions used in this test are consistent with its purpose and circumstances? Why or why not? **Hours: 6**			40 questions (of various types) and be based on a Table of Specifications and a specific set of learning objectives. The best Model Papers will be shared with local schools as an educational resource.
Topic 7.3: Using Tests as a Pedagogical Tool: Under this topic, Trainees will better understand that student assessments can fulfill a range of pedagogical functions including formative ones. Discussions under this topic will focus heavily on the use of formative assessment as an important pedagogical tool and the importance of not using data generated with a formative purpose for promotion decisions. In addition, Trainees will learn how to build formative assessments into a classroom routine; they will also better grasp the various forms assessments with a formative purpose can take. As a result of hands-on activities, Trainees will also be better able to organize a classroom in order to check students' work routinely and use various procedures to question students effectively. This includes checking for deep understanding as well as the completion of standard homework assignments. During discussions of formative evaluation, Trainees will also be able to better understand that student 'mistakes' can provide opportunities to learn, if teachers can	• **7.3a:** Trainees can explain how formative assessment can be used as a teaching tool by giving specific examples. • **7.3b:** When given specific examples of student mistakes, Trainees can analyze common mistakes in students' assignments and determine the cause of any of the misconceptions discovered. • **7.3c:** Using case studies provided during class, Trainees can identify suitable remedial responses to a student's	*Checking for Understanding: Formative Assessment Techniques for Your Classroom,* by Douglas Fisher, Nancy Frey (2007) To be provided as a Handout *Analyzing and Responding to Student Mistakes,* in Delivering Remedial Support Services to Primary School Children (pp. 15-18 and pp. 36-40), by KAPE-Save the Children (2015) http://www.kapekh.org/files/report_file/Remediation-Module-for-SCI.pdf	• ***Group Work:*** In small groups, Trainees will review a number of handouts in the *Student Remediation Manual* on the KAPE website and complete the exercises provided (pp. 36-40). When done, Trainees should present their responses to the main group and resolve any differences through discussion.

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
understand why students make the mistakes that they do. When properly corrected, mistakes become a part of the learning process. Through systematic analysis of student mistakes, Trainees will also be better equipped to determine the causes of mistakes and the faulty reasoning behind them in order to provide more individualized guidance to students. Trainees will also receive guidance in conducting statistical analysis of mistakes, to determine the areas of learning where students are having the most difficulty. **Key Discussion Questions:** 1. How can teachers better organize the different stages of a lesson to include Formative Assessments? 2. What should be the form and the frequency of assessments that have a formative purpose? (5 minutes? 15? 30?) 3. Do you think formative assessments need to be marked and recorded systematically? Please explain your answer. 4. Should you keep track of formative assessments? If so, how should one do it (portfolio, school record, posters etc.)? 5. In your previous teaching experience, have you ever systematically analyzed student mistakes in a formative manner? How can such mistakes be	misconceptions based on an analysis of his or her mistakes.		

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
turned into a pedagogical resource? 6. In what ways might data generated for a formative purpose be incorrectly used? Please explain your answer. **Hours: 3**			
Topic 7.4: Concepts of Validity and Reliability: This topic focuses on practical definitions of 'validity' and how a better understanding of validity can help improve the meaningfulness and usefulness of tests. Discussions under this topic will show Trainees how definitions of validity have moved away from traditional conceptions that focus on 'Kinds of Validity' (e.g., Content Validity, Predictive Validity, etc.) to the idea of validity as a 'unitary' concept. When using validity as a unitary concept, one no longer assesses the validity of a particular testing instrument itself but rather the evidence that it generates instead. Trainees will learn that testing instruments can generate content-related evidence of validity (e.g., the degree to which test items adequately sample the content to be assessed), criterion-related evidence (e.g., the degree to which test scores correlate with some other measure of what is being evaluated), and construct-related evidence (e.g., the degree to which the test can adequately explain a specific psychological characteristic such as mathematical thinking). Trainees will understand how we use these various aspects of	• **7.4a:** Trainees can define validity as a unitary concept. • **7.4b:** Trainees can explain why current definitions of validity favor a unitary concept. • **7.4c:** Trainees can explain the validity of assessment data in terms of content, criterion, and construct-related evidence. • **7.4d:** Trainees can effectively debate the merits and demerits of 'teaching to the test' in terms of concepts relating to validity. • **7.4e:** Trainees can explain the concept of reliability	*How to Construct Achievement Tests,* by Norman Gronlund, Needham Heights, MA: Simon & Schuster (1991) (Chapter 9) To be provided as a Hard Copy *Teaching to the Test: A Controversial Issue in Quantitative Measurement,* by Styron, J.L., et al. (2012) in Systemics, Cybernetics, and Informatics (Vol. 10). http://www.iiisci.org/journal/CV$/sci/pdfs/HEA561DK.pdf	• ***Group Debate:*** The seminar will break into two groups of 5 to 6 Trainees to debate the following proposition: *Teaching to the Test is detrimental to making valid decisions about the promotion of a student.* One group should provide arguments to support the merits of this statement while another group should argue that teaching to the test is a practice that does not undermine the validity of evidence upon which schools make promotional decisions. Participants may choose the group that best matches their own views. • ***Individual Writing***

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
validity together to arrive at a 'unitary' appraisal of an assessment's validity. Trainees will also be expected to use concepts of validity to debate controversial issues in testing such as the common Cambodian practice of 'teaching to the test,' which is commonly used among Grade 12 teachers. Trainees will also explore the definition of 'reliability' and how this concept is applied to determining the consistency of test scores. These discussions will include a review of the factors that may affect reliability and how they can be controlled for. Trainees will also do some practical exercises in finding the reliability coefficient of a test using internal consistency methods and have exposure to interpreting the meaning of resulting coefficients. **Key Discussion Questions:** 1. Why do you think that psychometricians have moved towards thinking about validity as a unitary concept? 2. Do most Cambodian teachers ever concern themselves with concepts of validity? Why or why not? 3. Do you think that concepts of validity and reliability are too abstract and theoretical to be of much practical use to the everyday classroom teacher? Why or why not? 4. What kind(s) of validity-related evidence does a	and how this concept is used to explain the consistency of test scores on a particular assessment. • **7.4f:** Trainees can do practical exercises to determine the correlation coefficient of a test using internal consistency methods.		*Assignment:* Using a test with at least 20 test items on it, Trainees will each undertake an analysis of the internal reliability of the test using the split halves method. Trainees will present their results and make an interpretation of the meaning of their findings in terms of reliability.

165

Topic Name & Description	Learning Outcomes	Curriculum Documents & Reading Assignments	Suggested Project Work or Written Assignment
Table of Specifications provide? Explain your answer. 5. Many teachers in Cambodia prefer to teach to the test rather than teach the curriculum. How would you explain the merits and demerits of teaching to the test in terms of concepts of validity? 6. What factors might affect the reliability of a test? Can you give some examples of concrete factors affecting reliability and how they might be controlled for? **Hours: 4**			