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CURRICULUM DEVELOPMENT AND EVALUATION

A Method for the Aboriginal Firefighters Association of Canada

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CONTENTS

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EXECUTIVE SUMMARY

A curriculum is a plan for a sequence of experiences that occur during education. A good curriculum will teach the teacher what to teach, how to engage learners and how to check that the learners understand. A good curriculum will bring about a positive change in a person's skills and knowledge. A good curriculum will address the needs of the community and it will adapt to change as the needs of the community change.

This paper describes a process called "Design a Curriculum" (DACUM) that involves stakeholders in curriculum design. The DACUM asks stakeholders to identify their needs, to state the problems that need to be solved and to identify the steps that need to be taken to arrive at a solution. The DACUM process ensures that the curriculum will be technically correct (because content experts are participating) and politically acceptable because community needs are identified and included. This process and approach need to be employed when developing new programs.

The judgement of whether a curriculum is good or bad can be influenced greatly by the quality of instruction. Learners do not usually get to see the curriculum so will faithfully assume that the curriculum is being followed, that the information being presented is technically correct, that any activities described in the curriculum are being conducted and that any evaluation of learning is fair. What is required here is an acceptable definition of good instruction. If instructors are well taught and are teaching according to an accepted definition for good instruction, then problems arising from the learner's experience may be attributed to the curriculum and not the instruction. This paper identifies sources for accredited checklists for evaluating instruction. Instructor preparation has to be considered when choosing curricula and checklists are a proven, accepted method for preparing and evaluating instructors.

With stakeholder involvement and good instruction addressed, a proper evaluation of the curriculum may be undertaken. Experienced teachers, instructors, trainers and coaches will be familiar with a format or arrangement of steps in a curriculum. This format includes a pre-test or way of determining what the learners know or can do already, a statement of learning and skills objectives, a list of resources needed for an instructor demonstration and for student practise, a description of the student practise or activity, some kind of evaluation to determine if the students have acquired the new knowledge or skill. This paper presents a 50-point curriculum evaluation checklist for the evaluation of curricula and as a guide for writing curricula. In this paper the curriculum evaluation checklist is used to evaluate the NFPA *Learn Not To Burn*® program kindergarten to grade 2 and the

NFPA *Remembering When: A Fire and Fall Prevention Program for Older Adults®.*

The NFPA ***Learn Not To Burn®*** curriculum is an important and long-standing fire service program and use of the curriculum evaluation checklist reveals that the curriculum is of a high standard. The program contains multiple learning activities and teachers may access videos. Praise is deserved for informing the family about what was achieved in each lesson by way of a letter and for involving the family in home exercises. However, letters to inform the family should be sent before the lessons are taught and not after the fact. This would be much more inclusive.

The use of the curriculum checklist reveals that program costs are not explained. Permission to introduce a new curriculum from the authority having educational jurisdiction is not described. The curriculum package does not provide for readily accessible feedback to the program's authors. After a search, it was possible to find a "Contact Us" option at the bottom of a Public Education menu. This rather hidden mechanism is bound to restrict good ideas and constructive criticism that might be considered for program enhancement.

There is considerable research evidence in support of early childhood fire safety education. Decision makers should confirm the need for this programming in their own communities through their own evidence-based research and obtain the appropriate permission from the governing educational body before proceeding.

The NFPA ***Remembering When: A Fire and Fall Prevention Program for Older Adults®*** was developed in 1996 with hopes to make a measureable improvement in the health and well-being of older adults by addressing the causes of injuries and deaths as a result of falls and fires. The program is divided into two parts consisting of a 1-hour group presentation and a home visit of unknown duration that may be presented in combination or as a group presentation only or a home visit only.

Seniors tend to give favourable reviews but this may be because the opportunity to socialize and provide any break from the routine or loneliness is welcome. The group presentation is best described as a lecture session with the use of a trivia game to maintain interest. Some research indicated that the trivia game could not be fully employed given the time needed for 8 fire prevention messages, 8 fall prevention messages and 49 sub-messages. Following a group session it is uncertain if the acquired knowledge will motivate senior to make desired changes at home. The group session is least costly can address a large number of people but may be least effective in causing change at home.

If the senior's home is a licensed and regulated facility then the changes needed to improve safety will be minimal. Given this understanding, the group session is best delivered to seniors who live independently. The group session will be useful for the introduction of presenters to seniors by way of church or service clubs. The home visit is a more labour intensive one-on-one style presentation where the presenter presents the fire and fall prevention messages and conducts an inspection using a home safety checklist.

There is an opportunity, while using the home safety checklist and with the senior's permission, to intervene directly in making changes in the home. The extent of direct intervention is not discussed. There is sufficient detail regarding the placement of smoke alarms in the training package that installation could be undertaken and the provision of the liability waiver in program materials implies that this action may be taken, but there is no direction to do so. This is a lost opportunity for direct intervention.

In March 2012, a Smoke Alarm Movement, an initiative of the Provincial Government, committed to ensure that a working smoke alarm was in every home. With over 41,000 distributed and installed there was an opportunity to study the effect of this effort. The University of the Fraser Valley study *Smoke alarms Work, But Not Forever* compared the periods when the initiative commenced (2007-2011) to the period in the later stages and conclusion of the project (2012-2014) and found that deaths per 100,000 citizens declined by 65% and death per 1,000 fires by 37%.

This research indicates that working smoke alarms save lives so the idea that the NFPA *Remembering When Program* will save lives, if working smoke alarms are installed, is sound. However, in contrast to the B.C. initiative, the NFPA program does not follow through with direct action the way the B.C. program did, not only for smoke alarms but other fall safety prevention measures such as the installation of grab bars.

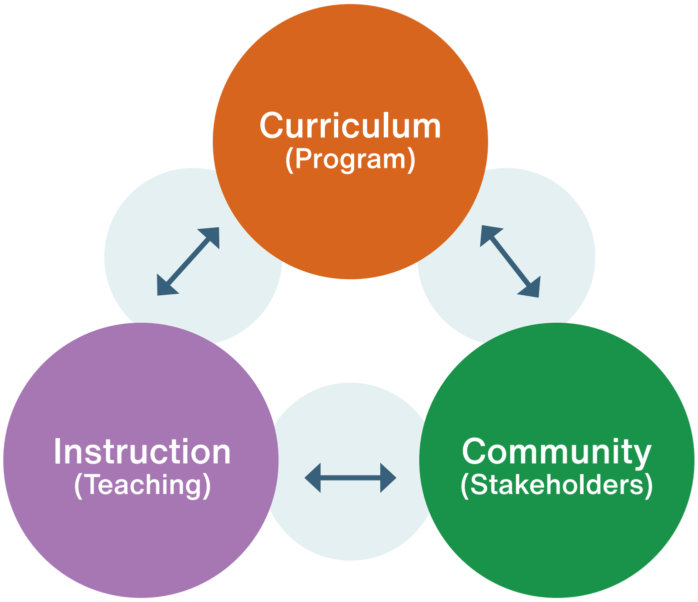
Decision makers should confirm their program objectives for fire and fall prevention before adopting this program to confirm if intervention is to be undertaken through the installation of smoke alarms, fresh batteries and grab bars and to ensure that a supply of these resources is available.

In the final section, a flowchart diagram is presented to show the systemic relationship between the community, the instruction and the curriculum. This document represents a step-by-step approach for addressing the issue of curriculum development and evaluation and how to manage it.

PROBLEM STATEMENT:

Curriculum development and evaluation is part of a system. The evaluation of a curriculum as good or bad will be influenced by the degree of community involvement that has taken place in the development of the curriculum, the format of the curriculum and the quality of instruction.

Figure 1: diagram of the interaction between the curriculum, instruction and the community.



Curriculum development and evaluation should not be undertaken in isolation. A good curriculum should address the needs of the community. Here, the community is defined broadly as stakeholders such as parents, students, subject experts and governing bodies. To what extent has the community been able to clearly identify and define their needs/ problems? Does the existing curriculum address those needs or some other issues? Providing a method for community and stakeholder involvement in curriculum development is a proven solution for this problem.

A good curriculum can be judged unfairly as a bad curriculum. For example, what if an instructor has decided not to follow the curriculum? What if classroom activities are unorganized or out of logical order? Maybe the instructor has a charismatic personality, which has nothing to do with the curriculum design but the program curriculum receives high marks because of that. How can a curriculum be judged fairly? Providing an accepted definition of good instruction will help to separate instructional issues from the curriculum.

Every curriculum or program will have a design. The design dictates what happens and when it happens during the learning situation. The issue for the learner is that the design is in the background it may be contained in a guide that only the instructor sees and it may not be obvious to stakeholders what the design is. Sharing a template for a good curriculum, based on an accepted standard, will solve this problem.

INVOLVE THE COMMUNITY, STAKEHOLDERS AND CONTENT EXPERTS:

How to design the content of a curriculum (DACUM)

The checklist for evaluating a curriculum should include evidence that the program objectives have been shared with the community. The community agrees with the objectives and the objectives address the relevant needs within the community.

One method for addressing these requirements is to conduct a “Design a Curriculum” (DACUM) session for stakeholders. The central goal of the DACUM is to identify all the relevant issues that need to be addressed as presented and described by the participants. By undertaking this process involving content experts and the community, the program will be technically correct, appropriate for the community and politically supported by the participants.

Identify the stakeholders and with them, establish the need for a DACUM to define the problem(s) and to identify an action plan for solution(s). Describe the DACUM process to the participants.

Assemble the following resources:

- Meeting date, time and location that will allow for stakeholder participation
- Table, chairs and a wall or white board on which to stick notes
- Flip chart paper or white board for writing meeting objectives
- 6X8 sticky notes or index cards with a non-permanent glue stick (these allow for the movement and grouping of ideas or the removal of bad ideas on the wall or white board)
- Felt pen to write on sticky note paper or index cards
- An invitation identifying participants, DACUM date, time and location, meeting duration, a general statement for the purpose of the DACUM, why the participants have been invited, and the meeting duration (allocate no more than 3 hours)
- Desk cards and name tags for participants if the stakeholders are not known to each other
- Coffee, juice, snacks, sandwiches for breaks

On the day of the DACUM, welcome the participants and state that they have been invited to participate because of their expertise, knowledge of the community and the importance of their voice in this process for providing a solution. Establish a rapport with the stakeholders by introducing yourself and by providing a brief statement of your background, experience and qualifications. Ask participants to identify themselves, give their title and describe their work experiences.

Help the group to identify the goals that they want to have achieved by the end of the session. Write these goals on a flipchart paper or white board. These represent the goals for the meeting and need to be checked off as “Completed” or “Not Completed” at the end of the session. This assures the group that the meeting will be worthwhile because it will address the needs they have identified and maintain a record what was achieved and what still needs to be done.

For some cultures, it is considered disrespectful to tell the teacher or leader what needs to be done. This is a reversal of roles but it needs to be explained that their participation is necessary for success and that all of their contributions will be supported and not judged.

Describe the DACUM process as one of identifying all the related issues. State that once an issue is identified it is written on a card and posted on the wall board.

At times, a participant may wish to discuss a particular issue in detail. Avoid this by explaining that it is important not to slow down the process of issue identification and that all items will be discussed in detail at the end.

Once issues have been identified, the wall will appear as a confusion of ideas, unsorted and random. What is needed is a framework for classifying the ideas so that they appear in an orderly and logical manner.

The framework for classification might involve 1) monetary issues/budget/acquiring human expertise and physical resources or allocating resources in certain ways 2) cooperation and coordination of effort, using influence and persuasion, creating harmony, and getting others to agree on the issues 3) identifying goals, asserting goals and ensuring unity of effort 4) identifying common values and obtaining commitment from participants. Other frameworks can be identified and will work if they can help to classify and organize the issues.

Once the issues have been classified, the group must be given opportunity for discussion that was promised earlier. The group will discover that all of the specific issues are actually enabling steps that need to be undertaken to achieve the desired outcome. This is the time to be specific, avoid generalities, and ask participants to be specific and to clarify the issues that they have raised.

If an action plan is to be written, each of the enabling steps need to be assigned to someone for completion and a timeline needs to be given.

An example of a completed DACUM chart is provided below in Figure 2.

AN EXAMPLE: DACUM FOR SECOND RESPONDERS:

A Program in Response to the Opioid Crisis

On April 9, 2019 a DACUM was conducted to identify the challenges and needs of clients who have overdosed on drugs. An assembly of mental health and addiction specialists, first responders and peers was convened to provide insight into the crisis and to design a team to address the needs of clients.

This DACUM chart shows the framework used on the far left as human and physical resources, goals, measurement, coordination/cooperation and team values. On the right, all of the specific issues within each classification represent the actions or issues that need to be addressed in order to achieve success. In this example, the tasks and timelines were assigned verbally and do not appear here.

Figure 2: Second responder program DACUM chart. Fraser Health Authority, Peer Workers and Surrey Fire Service First Responders conducted April 9, 2019

RESOURCES (HUMAN)	
Mental health addiction specialist	1st responder
Peer to client worker	Support person administration staff
Determine staffing hours and days	1st responder staff selection process

RESOURCES (PHYSICAL)	
Unmarked vehicle	Care sheet
Harm reduction sheet	Naloxone kit

GOALS	
To identify clients who have overdosed and who **have not** been transported by BCAS to hospital	To act as a bridge between the time of overdose and treatment/care
To converse with the client regarding willingness to participate in the program – intention for the team to visit	To conduct sessions at the client's place of residence
To conduct sessions within 24-48 hours of overdose and at a time conducive to client availability	To distribute harm reduction sheet, care sheet, naloxone kit
To discuss treatment options	To involve family (in consideration of confidentiality)

MEASUREMENT	
Number of clients contacted	Percentage of clients entering care

CORDINATION CONSIDERATIONS	
Ministry notification	BC ambulance service notification
Police notification	Feedback loop to team regarding treatment availability
Media strategy and plan	

TEAM VALUES AND TRAINING	
T.R.I.P. training for 1st responder	Language sensitivity
Gender sensitivity	Recognition of patient stigma regarding overdose
Privacy: No uniforms example, unmarked vehicle, guarded conversations with clients	Scenario-based training - role playing Aapplication

In this example, stakeholders came together, identified the relevant issues and through consensus, agreed on a plan of action. The program has been implemented but was suspended in the wake of the Covid-19 pandemic due to the inability to maintain distancing with clients.

It is expected that the program will be re-introduced, once safe to do so, in response to the overdose health emergency. Once sufficient data has been collected, the program will be evaluated for effectiveness.

DEFINITIONS AND MEASUREMENT OF GOOD INSTRUCTION AND A GOOD CURRICULUM

Useful definitions of good instruction or, good curriculum must be **valid, reliable and useable. Valid** definitions are true. Here, experts and the community would agree that the definitions are correct or true. A useful definition must also be **reliable.** A reliable definition will result in the same judgement when used by different evaluators when assessing the same instruction or program. Reliable definitions are clearly written, rely on observations and avoid personal interpretation of the standards by the evaluator. Last, definitions of good instruction or good curricula must be **useable.**

In an attempt to create a valid and reliable evaluation, definitions tend to get longer and detailed. Long and detailed definitions are counterproductive in that the users can become distracted or fatigued and their attention is no longer focused. Using the definition becomes more important than the lesson or program that is being evaluated and the reliability in the measurement can be lost. Therefore, creating a valid, reliable and useable measurement method for good instruction and a good curriculum requires a compromise.

The compromise adopted here is the use of checklists against which teaching and a curriculum may be evaluated.

THE EVALUATION OF GOOD INSTRUCTION:

Establishing the use of a performance checklist as an accepted way to evaluate instruction

As stated previously, a good curriculum can be judged unfairly if the instruction is poor. Providing an accepted definition of good instruction will help to separate instructional issues from issues that the curriculum may have. The purpose of this section is to establish the use of performance checklists as a valid, reliable and useable method for the evaluation of instruction and to ensure that **instructor training** is not ignored when making decisions about the effectiveness of a program.

The International Fire Service Accreditation Congress (IFSAC) and the Pro-Board are both fire service organizations established for the accreditation of agencies that certify students in various fire service disciplines. According to *IFSAC's Criteria for Certificate Accreditation (October 26, 2019 P-18)* "the certifying entity shall establish and maintain examination procedures that are valid for administrating knowledge and skills tests" and the entity "shall have identified criteria for grading all exams (knowledge and skills) etc." Additionally, the Pro-Board *Self Assessment Worksheet* for entities seeking accreditation of programs states, "correct performance outcome of skills is normally indicated as part of the yes/no or pass/fail scoring checklist." (P-12 01/09/2020)

All Canadian provinces and the Canadian Armed Forces have entities that are accredited. For example, the Justice Institute of British Columbia Fire and Safety Division is an accredited entity with both IFSAC and the Pre-Board in regard to the Fire Service Instructor 1 and 2 programs (NFPA 1041). It follows that the evaluation method used for instruction is an approved system by both IFSAC and Pro-Board and serves as a definition of good instruction. A link to the Ontario Fire Service Instructor evaluation sheets may be found here.

https://www.oafc.on.ca/sites/default/files/uploads/Training/OFMEM-Train-Res/Sign-Offs/OFMEM%20Skill%20Sheets%20Fire%20Service%20Instructor%20I%20-%20Nov.%202017%20Updated.pdf

THE EVALUATION OF A GOOD CURRICULUM

Experienced fire service instructors, trainers and educators will know of programs that follow a familiar format. This format includes a statement of learning objectives, a demonstration by the Instructor, the presentation of a learning activity for students to practise, an evaluation to assess learning effectiveness. These principles were first published by Ralph W. Tyler in *Basic Principles of Curriculum and Instruction (1949).* Tyler's basic principles were widely welcomed in classrooms due to the ease with which they could be applied in curriculum planning and they have shaped curriculum and instructional design to this day.

Tyler's model is comprised of 4 major parts. **1) Defining appropriate learning objectives.** Related questions include, "What do the students need to do in order to be successful?" "What do the stakeholders say about what the educational outcomes should be?" **2) Establish useful learning experiences.** The experiences must lead the students to mastery of the objectives. Here, Tyler stated that it is important for students to discover content that is useful and meaningful to them also. The learning experiences are to be engaging. **3) Organize the learning activities to have a maximum cumulative effect.** The progression of learning activities is logical and neither overwhelming or underwhelming. **4) Evaluating the curriculum, assessing learning experiences and revising those aspects that did not prove to be effective.** The teacher is to consider what was done well and what should be changed in order to be effective and enhance student success and learning.

Given that Tyler's model is well accepted as a standard for curriculum design, it follows that it may be used to evaluate an existing curriculum. What needs to be determined is the extent to which Tyler's principles have been incorporated into the program under review. The use of a checklist or template for evaluation as an accepted method for instruction and the section below demonstrates this method in the evaluation of curricula. This template allows for the consistent application of a standard between programs and knowing that the standard is accepted, it may be used while writing curricula to ensure that the desired feature are present.

The checklist or template has 4 sections that follow Tyler's model with the addition of specific related issues within Tyler's general categories. This model is first presented and then applied to the NFPA *Learn Not To Burn Program®* followed by application to NFPA *Remembering When: A Fire and Fall Prevention Program for Older Adults®.* In each case, the program is read and the statement is answered with a YES or NO response. A NO response indicates that the desired feature is not present in the curriculum.

CURRICULUM CHECKLIST

PROGRAM IDENTIFICATION: Name

Program Description: 3 sentences

1	A review of this program has been undertaken in the literature (if YES list sources) There has been some attempt to measure the impact of the program	YES	NO
2	In general, program reviews and evaluations appear favourable (if YES in #1 above.)	YES	NO
3	The cost for program implementation is explained	YES	NO
4	The curriculum identifies measurement methods or success indicators for evaluating results	YES	NO
5	The process for identifying the educational authority having jurisdiction, enlisting support and obtaining approval for the addition of the curriculum is explained	YES	NO
6	The program has lesson plans	YES	NO
7	The program has lesson plans for each lesson	YES	NO
8	The program develops **instructional** expertise by providing instructions and tips for presentations	YES	NO
9	The program develops **technical** content expertise by providing background and factual information	YES	NO
10	The program **does not** require the participation of an outside expert for instruction	YES	NO
DEFINING OBJECTIVES			
11	The target group is defined/described	YES	NO
12	Lesson plans contain written **knowledge** objectives	YES	NO
13	Lesson plans contain written skill objectives (applied knowledge)	YES	NO

14	The program content matches knowledge objectives	YES	NO
15	The program skill/practise content matches skill objectives	YES	NO
16	All knowledge and skill objectives have been shared with the community	YES	NO
17	All knowledge and skill objectives have been shared with the community **before the commencement of instruction**	YES	NO
18	The community (in broad terms) agrees with the knowledge and skill objectives to be achieved by students (no objections)	YES	NO
19	All knowledge objectives are explained verbally or shared with students (in written form if age appropriate) so that students know what is expected of them	YES	NO
20	All skills objectives are explained verbally or shared with students in written form (in written form if age appropriate) so that students know what is expected of them	YES	NO
21	There is evidence that the program addresses a need within the community served. (if YES identify the research or source)	YES	NO
22	Activities or questions have been provided for use after class, at home or with family. (homework)	YES	NO
23	Subject information has been provided to the instructor for their preparation as an instructor in this subject	YES	NO
24	An estimate for lesson time is provided	YES	NO
IDENTIFY AND DEVELOP ENGAGING LEARNING EXPERIENCES			
25	Questions are provided in the lesson to check for student understanding of knowledge objectives during the lesson	YES	NO
26	Questions are provide to test for student understanding of knowledge objectives at the end of the lesson (a test)	YES	NO
27	An activity to practise skills is described/provided for the instructor to guide the learners during the lesson	YES	NO

28	An activity to test acquired skills is described/provided for the instructor to give to the learners at the end of the lesson	YES	NO
29	An answer key questions is provided	YES	NO
30	A description of acceptable skills performances is provided	YES	NO
31	Activities and tests may be duplicated for use in class	YES	NO
32	Alterative activities and solutions for activities are provided in the event that financial or other resources are not available	YES	NO
33	The program content is technically correct and compatible with current codes, standards and practise	YES	NO
ORGANIZING THE LEARNING EXPERIENCES TO HAVE A MAXIMUM CUMULATIVE EFFECT			
34	Previously learned material is briefly reviewed	YES	NO
35	Opportunities for classroom breaks are identified (if lesson is sufficiently long)	YES	NO
36	Lesson plans suggest a time to be spent on each objective	YES	NO
37	Instructors know how to get help and advice concerning instruction and program administration	YES	NO
38	Student materials are age appropriate	YES	NO
39	Student activities are age appropriate	YES	NO
40	In lesson plans the ratio of time spent by learner **listening** to learner **doing** is greater than 0	YES	NO
41	Knowledge and learning objectives are arranged in a logical order	YES	NO
42	The program message is focused	YES	NO
43	Applied knowledge is required in activities	YES	NO

EVALUATING THE CURRICULUM			
44	There is a pre-test (either for action such as “Has anyone tested your family smoke alarms in the last month?” or for knowledge) **and** a post test	YES	NO
45	Students are given an opportunity to evaluate the written material and in-class instruction (if age appropriate)	YES	NO
46	Students are given the opportunity to evaluate the relevance of the program to their needs (if age appropriate)	YES	NO
47	Instructors are given the opportunity to evaluate the program	YES	NO
48	Instructors know where to send their feedback	YES	NO
49	Ethnic and cultural diversity is shown through photographs, text descriptions, and examples	YES	NO
50	Gender neutrality is shown through photographs, text descriptions, and examples	YES	NO

APPLICATION OF THE CURRICULUM CHECKLIST TO NFPA PROGRAM *LEARN NOT TO BURN®*

The purpose of this section is to demonstrate than the curriculum evaluation system can be used to evaluate the curriculum of the National Fire Protection association (NFPA) *Learn Not to Burn* program.

To use the system the evaluator must read the curriculum and answer YES, NO or N/A (Not Applicable) on the checklist. The evaluator may make a list of page references as evidence of their evaluation and the presence or absence of the issue sought. A completed program evaluation may identify one or more NO responses which indicate that an aspect of the program has not met the definition of a good curriculum. In this instance, some repair to the program is necessary (by definition).

This process is applied to the program below.

PROGRAM IDENTIFICATION: Learn Not to Burn K-2

Program Description: Fire Safety awareness curriculum for young children with safety messages and fire safety behaviours including an escape plan.

3	The cost for program implementation is explained		NO
5	The process for identifying the educational authority having jurisdiction and obtaining approval for the addition of the curriculum is explained to the instructor		NO
DEFINING OBJECTIVES			
17	All knowledge and skill objectives have been shared with the community before the commencement of instruction		NO
21	There is evidence that the program addresses a need within the community served (if YES identify the research or source)		NO

IDENTIFY AND DEVELOP ENGAGING LEARNING EXPERIENCES			
ORGANIZING THE LEARNING EXPERIENCES TO HAVE A MAXIMUM CUMULATIVE EFFECT			
EVALUATING THE CURRICULUM			
47	Instructors are given the opportunity to evaluate the program		NO
48	Instructors know where to send their feedback		NO

The evaluation reveals the following results. An examination of the literature to review the program was initiated on the Internet (1). A difficulty was encountered whereby program summaries were connected to the NFPA and did not discuss any program problems. On the City of Greater Sudbury website it is stated that Fire Prevention Canada (FPC), a national registered charitable organization, made a commitment of $500,000 to Canadianize and implement this program nationally through the Fire Marshals and Fire Commissioners. In addition, the Canadian Tire Child Protection Foundation funded the program at a cost of $890,000 over a three-year period to provide approximately 13,000 sets of materials available in English and French to all schools across Canada.

With such support for a program that has been in development for decades, the program has been elevated to “cult status” and finding any criticism of the program is difficult. In fact, the Curriculum Evaluation Checklist shows that the fundamentals of this program are very strong. Therefore, praise for the program is expected and earned.

However, despite high praise, the Curriculum Evaluation Checklist identifies weaknesses in other areas. The cost for program implementation is not explained (line 3). Every program will have a cost even if it involves photocopying and support staff time. The cost of the program might be the first question asked by the educational authority having jurisdiction but steps for acquiring permission to introduce a new curriculum in the classroom are not discussed (line 5). Having permission to introduce a new curriculum is critical.

The program does do a good job of informing the family of what has been accomplished in class but this is by way of a letter home after the fact. The relevant criterion for curriculum evaluation (line 17) expects that program objectives have been shared with the community “before the commencement of instruction.”

Consequently, the community has no opportunity to agree or to disagree with the objectives or the need for such a program before the lesson is taught.

If this step had been missed for a controversial subject such as sex education, the consequence for the educators would be devastating.

No objective evidence is provided that the program addresses a need within the community (line 21). This kind of statistical information may be too detailed for the children but it is useful for the instructor and for any parents who make an inquiry. It is certainly useful for older students. Therefore, the program makes an assumption that the problem exists, the problem exists in this community, that everyone knows what the problem is and everyone agrees.

Some criterion in the curriculum assessment checklist will not be applicable in some cases. For the *Learn Not To Burn program,* lessons are sufficiently short that the necessity for identifying breaks is not necessary and the ability of the children to provide a meaningful evaluation is questionable.

Finally, the curriculum does not provide obvious opportunity for evaluation by instructors (line 47) or indicate where to send comments or concerns or feedback (line 48). One must search for a generalized form in a Public Education section. Providing a feedback form attached to the program solves this issue.

REMBERING WHEN: A FIRE AND FALL PREVENTION PROGRAM FOR OLDER ADULTS®

Stats Canada reported that approximately 17% of Canadians aged 65-69 reported a fall in 2007 and that falls increase with age with 27% of seniors age 85 and older having a fall. The *Remembering When* program was developed in 1996 in order to address the injuries and deaths caused to older adults by falls and fires. The program uses information cards, discussion, questions and a nostalgic trivia game to enable discussion and connect with the audience. Any agency contemplating the implementation of this program must make sure that falls and fires are in fact a problem in their targeted community. Here, choosing the right senior target group is critical. A facility for seniors will likely have installed fire detection and fire suppression systems. The authority having jurisdiction should be inspecting these systems routinely. Housing for seniors with fall prevention features incorporated in building design and conducting this program in this environment is not likely to create any benefit.

Remembering When: A Fire and Fall Prevention Program for Older Adults®, presents 8 fire prevention messages and 8 fall prevention messages with 49 sub-messages. The program is divided into two components consisting of a group presentation and a home visit. A presenter may decide which of the two approaches or combination of approaches is most appropriate.

The program text explains, "by focusing on these two issues, we can make a measureable improvement in the health and well-being of older adults".

This very bold statement makes an assumption that this program will achieve the desired results but explains little about how measurements should be taken to determine program effectiveness.

Reviews of the program have been undertaken with access to some research also made available on the NFPA website. Program evaluations tend to be favourable with the senior adult participants giving positive feedback. One must remember however, that in the environment of a care facility, or for a senior living alone, positive reviews should be expected as the program represents a break from routine or some relief from loneliness. One baffling feature is the optional *Safety Down the Isle* fashion show that is intended to create a fun environment in which to present fire and fall safety messages. The need to assess program effectiveness in this setting seems to be secondary if considered at all. In addition, an optional video may be purchased and features a celebrity who died 10 years ago.

The *Remembering When Program* requires the willing participation of a trusted agency such as long term care, the local fire department or a service club to take on program delivery. A solid reputation will be necessary to obtain access to seniors in facilities or for seniors to have the trust and confidence to let an unfamiliar face into their home.

The trusted agency will need to assign personnel and train them for program delivery in groups and in one-on-one settings. The agency should anticipate requests for smoke alarms, smoke alarm installation, night lights or bath mats but these costs are not discussed and neither are strategies for seeking financial assistance though a service club to acquire these articles for free distribution.

Group presentations are the most affordable (assuming the venue is donated) but are also likely to be the least effective. It is assumed that the acquired knowledge will be taken home and applied but these changes are difficult to measure. Conversely, in home presentations are very labour intensive but the visit is likely to be most effective with some corrective measures being undertaken while the advocate is there.

The group presentation is best described as a sit and listen program. There is an opportunity to increase audience participation and knowledge recall with the use of a trivia game (there is also a Canadian version) but there is very little opportunity to apply knowledge while in the group. Clearly, the trivia game is an attempt to increase participation but the game is primarily a listening activity and criterion #40 (in lesson plans the ratio of time spent by learner listening to learner doing is greater than 0) was not given a positive response. One study has stated that there was not sufficient time for the game as the information given in a power-point presentation took most of the time.

Research shows that exercise and balance programs designed to prevent falls in older adults also prevent injuries and if an injury should occur, it is less serious.

The *Remembering When Program* asks participants to discuss exercise with their doctors and there is a simple suggestion for participants to balance on one foot while holding a chair for support, but this is optional. The program seems fearful of liability and getting seniors to do anything other than listen seems to be associated with risk. There is a lost opportunity to describe, demonstrate and involve seniors in achievable exercises that increase flexibility and balance.

The curriculum does not contain information on how to obtain advice or further information from the authors. The curriculum does not provide forms or other means to provide feedback to the NFPA. A feedback form may be found in a Public Education section but having it attached directly to the program would resolve this issue.

APPLICATION OF THE CURRICULUM CHECKLIST

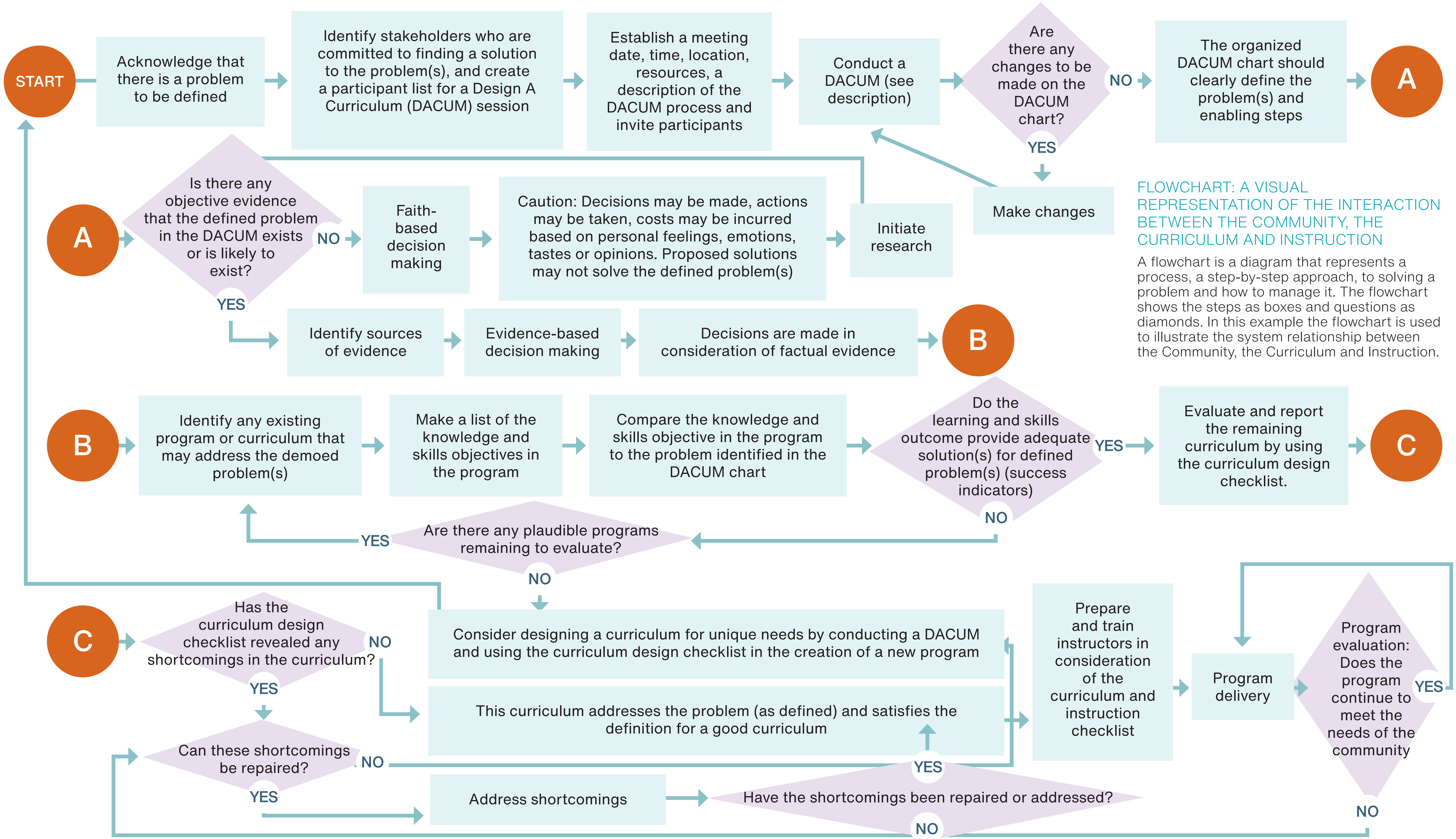
PROGRAM IDENTIFICATION: Remembering When: A Fire and Fall Prevention Program for Older Adults®

Program Description: A group presentation, a home visit or both are employed with the dual focus of fire prevention and fall prevention. Facilitator training materials for group and home visits are provided.

3	The cost for program implementation is explained		NO
4	The curriculum identifies measurement methods or success indicators for evaluating results		NO
5	The process for identifying the educational authority having jurisdiction, enlisting support and obtaining approval for the addition of the curriculum is explained		NO
10	The program **does not** require the participation of an outside expert for instruction		NO
DEFINING OBJECTIVES			
17	All knowledge and skill objectives have been shared with the community before the commencement of instruction		NO
IDENTIFY AND DEVELOP ENGAGING LEARNING EXPERIENCES			
ORGANIZING THE LEARNING EXPERIENCES TO HAVE A MAXIMUM CUMULATIVE EFFECT			
37	Instructors know how to get help and advice concerning instruction and program administration		NO

40	In lesson plans the ratio of time spent by learner listening to learner doing is greater than 0		NO
EVALUATING THE CURRICULUM			
45	Students are given an opportunity to evaluate the written material and in-class instruction (if age appropriate)		NO
46	Students are given the opportunity to evaluate the relevance of the program to their needs (if age appropriate)		NO
47	Instructors are given the opportunity to evaluate the program		NO
48	Instructors know where to send their feedback		NO

Before an agency such as the fire department, long term care or a service club chooses *Remembering When: A Fire and Fall Prevention Program for Senior Adults* as a remedy, the agency must conduct a thorough study to determine their perceived problem. Group presentations result in a lot of seniors receiving information but the actual application of this knowledge at home by the seniors is difficult to measure. The group presentation does introduce the topic to the senior and will provide an opportunity for the senior to seek a home visit. The home visit will allow for the use of an assessment checklist and the visit may result in greater change if the facilitator undertakes action to address some of the safety measures. Here, an agency may be uncomfortable with liability and may ask facilitators not to be directly involved with installations. The agency must be fully aware of the time commitment needed and that one-on-one home visits are labour intensive and difficult to staff in volunteer situations.



FLOWCHART: A VISUAL REPRESENTATION OF THE INTERACTION BETWEEN THE COMMUNITY, THE CURRICULUM AND INSTRUCTION

A flowchart is a diagram that represents a process, a step-by-step approach, to solving a problem and how to manage it. The flowchart shows the steps as boxes and questions as diamonds. In this example the flowchart is used to illustrate the system relationship between the Community, the Curriculum and Instruction.

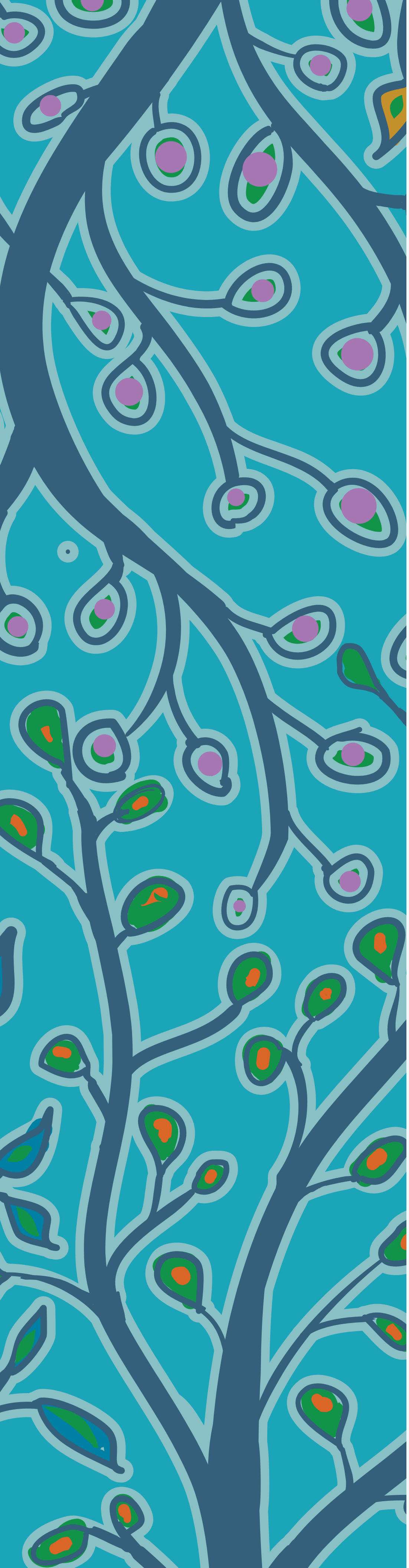
CONCLUSION

A good curriculum will be based on objective evidence that the learning outcomes it will address the needs of the community of which stakeholders, educators, students and families are a part. The implementation of curricula without objective evidence will be based on personal perspective, feelings, and beliefs.

New curriculum should take into account the needs of the community and address these needs by way of the curriculum learning objectives. The Design a Curriculum (DACUM) process has been described for this purpose. Curriculum should follow a recommended design. This is presented here in the form of a checklist that serves as an evaluation tool for existing curricula and as a template for the development of new curricula.

A curriculum is part of a system. Just as it will be judged poorly for not addressing community needs, it may also be judged poorly and perhaps unfairly if instruction is poor. Accepted checklists for the evaluation of instruction are identified.

The community will change over time. A curriculum should be evaluated continually to ensure that it is serving in the way it was intended. The evaluation tool for curricula has been included here.



National Indigenous
Fire Safety Council Project

Projet du conseil national
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