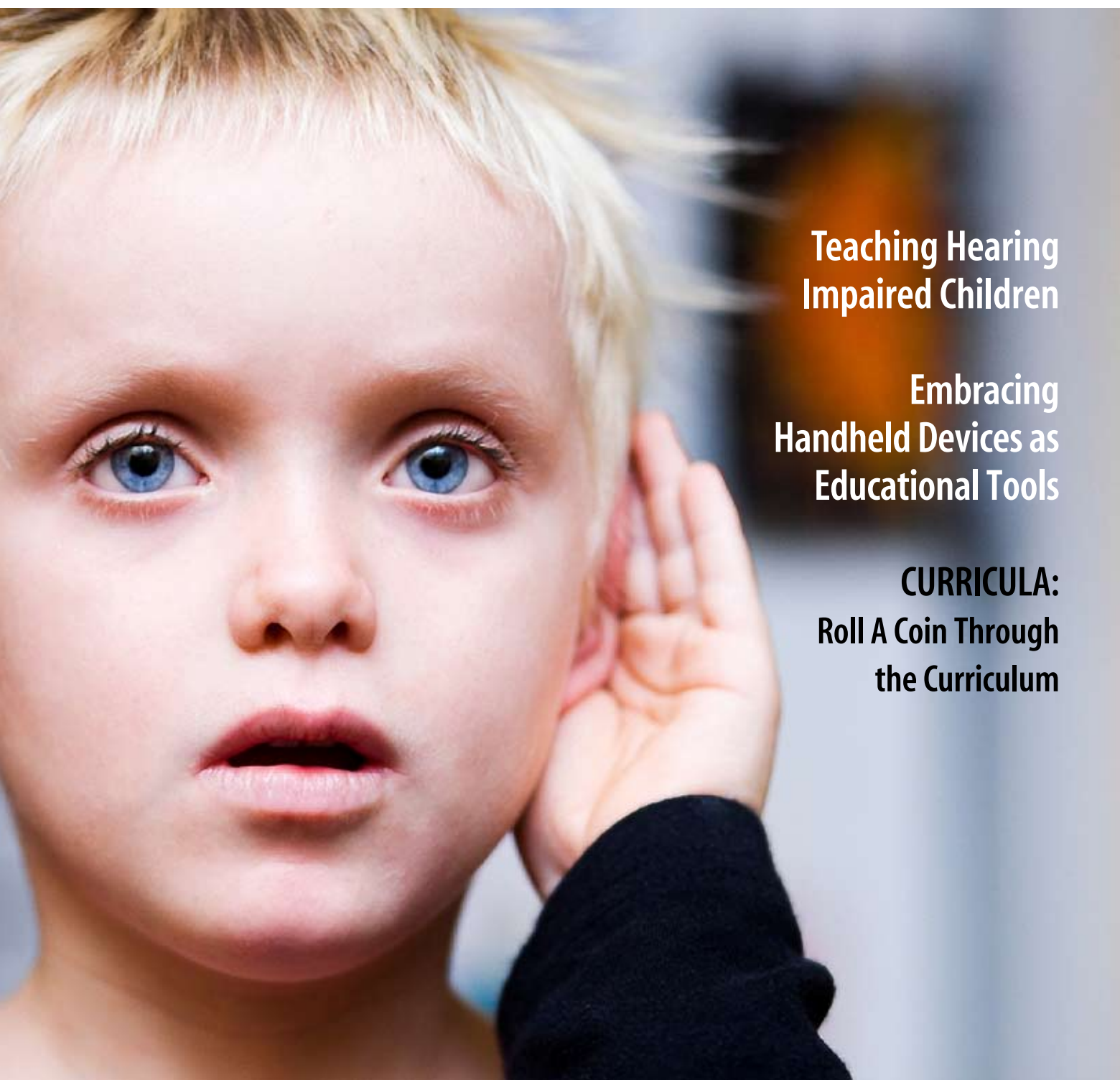


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LE PROF



**Teaching Hearing
Impaired Children**

**Embracing
Handheld Devices as
Educational Tools**

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Roll A Coin Through
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NOTES

We know that technology's footprint is shrinking and becoming increasingly portable. When we see a young person with a cellular phone or a handheld gaming device, the normal reaction is one of distraction. In other words, these are not instruments that have any place within the hallowed halls of an institution, certainly not in a classroom environment. They would be disruptive and divisive in the conventional classroom.

However.

If the idea of bringing real-world tools and resources into the classroom makes sense, then the aforementioned devices, that are, in essence, communications media, have a place after all. That is, if they're used properly and adhere to actual learning outcomes. We know that the classroom extends well beyond its four walls. Anyone with a wireless connection and an Internet account knows that. Instead of condemning 'tools of distraction' perhaps they should be embraced in the modern context of learning since they are pieces of technology with which students have great familiarity and reliance. As do parents when it comes to cellular phones, for example.

In a feature article, Carmen Berg makes a compelling argument for acceptance and utilization of these portable tools and explains how they can be used to the advantage of the teacher and the student.

In the other feature article, Ron Doorn addresses an important topic that doesn't often see the light of day and one that affects more of us than we tend to think; those with hearing disabilities. For teachers, it is a challenge to accommodate such individuals in the hubbub of a regular classroom. Doorn's article explains, in a comprehensive way, the issues, looks at underlying research and proposes strategies for successfully integrating students with a hearing disability, into the routines and processes of today's lessons.

In his long-running series of provocative columns, Richard Worzel undertakes a thought experiment where the reader is asked to imagine an idealized situation where each student is treated to the uplifting experience of one-to-one instruction from the most able teacher in each and every subject area. It is a radical notion but one, in which he argues

persuasively, is in our power to deliver. This column is the first of two parts.

Wili Liberman

Next Issue

New Product Purchaser's Guide
21st Century Learning
Prime Minister's Awards for
Teaching Excellence

CURRICULA-
Royal Canadian Mint Resources

Computers, Web Stuff, Futures
and More

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Richard Worzel, C.F.A.

The End of the Local Monopoly, Part I



Teachers from Socrates up to the present have taught in much the same way: by lecturing in person to a group of listeners. There is a lot to recommend this approach, not least that we are all familiar and comfortable with it, and it's simple to do: take people interested in learning (or who are required to be present), add someone who knows the material, and presto! You have a class. Everything else is a frill. Add to this that we know the large majority of in-person communications is non-verbal, and lecturing has a power that goes beyond the mere conveying of data or information.

But there are two major drawbacks of in-person lecturing: it imposes a de facto geographic monopoly on education, and a one-size-fits-all mentality on teachers and students alike. Let's look at the geographic monopoly first, and then segue into differentiated instruction for each student.

If Socrates were available to lecture (or dialog) on philosophy at a public school, but not in your area, you might have to settle for Joe Schmoe just because he happened to teach at your local school. Indeed, with a few exceptions, virtually all teaching and lecturing is determined by a geographic monopoly: you're stuck with the teachers who happen to be available. Until very recently, there have only been two ways to change that: lure the best teacher to your area, or go to the teacher you want.

Having students taught by whomever is available locally may be a good thing, or it may be a bad thing, but mostly it's a mixture. Like many people, I had a few dud teachers, a large number of good teachers, a goodly number of excellent teachers, and one life-changing teacher in my public school education. But does it have to be that way any more? Do students need to settle for the teachers available in their local schools?

Of course, teachers don't teach based only on their own knowledge any more: they use teaching materials to supplement their talents. The classic example is the textbook, which is written by experts, and contains examples, problems, exercises, illustrations, and charts that would be well beyond

most teachers' abilities to prepare on behalf of their students in the prep time available. In this way, we are already using technology (albeit based on movable type, a 15th century technology) to buttress the capabilities of local teachers. And this has worked extremely well: the education delivered by teachers today averages out to be the best in history. I say that it "averages out" as the best in history because there have been select individuals, such as the children of royalty or the aristocracy, who have been tutored intensively by brilliant teachers that may have obtained better results. Today's result is different: we deliver consistently high quality education to virtually everybody. It's just that not everybody profits from it fully or equally.

This brings me to my central point: Why should we stop with the technology of the 15th century to supplement and support the abilities of teachers? And why shouldn't every student have available the intensive, one-on-one experience with the best possible teachers to enable

their learning? We now have the ability to do just that, and the cost is declining to the point where it is competitive with traditional lecturing.

In an earlier column, I wrote that the best way to teach a given subject to a specific student depended on who was doing the teaching, who was doing the learning, and the material being taught. Let's work with that concept and do what Einstein called a gedanken (thought) experiment about what we could do if we so chose.

We know that every individual represents a

"We know that every individual represents a unique mix of emotional and intellectual intelligence, plus learning strategies that work best for them. In our experiment, therefore, let's assume we can find an approach for every student that optimizes their ability to understand and absorb a given subject matter. I'm a visual learner, for example, and have to see something before I can really absorb it."

FUTURES

unique mix of emotional and intellectual intelligence, plus learning strategies that work best for them. In our experiment, therefore, let's assume we can find an approach for every student that optimizes their ability to understand and absorb a given subject matter. I'm a visual learner, for example, and have to see something before I can really absorb it. Listening doesn't work as well for me, which explains why I always took copious notes in any class I attended: it allowed me to see what the lecturer was saying. And I enjoy a high level of abstraction that starts with the familiar and concrete, but then draws inferences that takes me beyond the everyday into wider generalizations and hypotheses. There's something about glimpsing distant vistas of knowledge that grabs and motivates me (which also explains why the work I do as a futurist so fascinates me). So, if I were the student, we would clearly focus on visual instruction, and lead the subject matter into abstraction, generalization, and inference.

Next, we also know that different teachers reach different students with greater or lesser success. My daughter, for example, is a real down-to-earth person, very different from me (which made it very difficult for me to help her with her homework). She had a teacher in primary school who was known as an excellent teacher, but, like me, loved intellectual abstractions. My daughter and her teacher also had very different emotional strategies for socialization as she tends towards the intimate and personal, and he prefers to be aloof and detached. The two of them struggled to communicate, and at times had difficulty even being polite to each other. Each one felt the other was being deliberately obtuse or obstructive whereas it was clearly a case of the wrong teacher with the wrong student.

Great teachers usually find a way to reach even those students that are very different from them, yet even great teachers occasionally get students they can't reach. Accordingly, we would want to match the student with the teacher, so that social styles, learning strategies, and the other intangible things that happen in the head and heart match up, making it easier for teachers to teach, and students to learn. Imagine, for example, having a classroom of students who just got it when you were teaching, or imagine having only teachers that really spoke to you in all of your studies. That's the objective for all students and all teachers in our thought experiment.

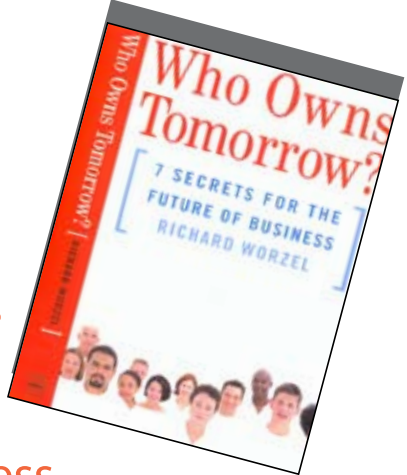
Next, teaching strategies should change according to the subject being taught. To a certain extent, we already do this. We use photographs, illustrations, charts, aural demonstrations (e.g., singing & language pronunciation), class trips, hands-on experiments, physical examples, recordings, videos, and so forth, to convey different ideas and subjects. Some things, like woodworking, dance, drama, or tennis, can best be learned kinesthetically, by actually doing them, and that's how we teach them. So using different teaching methods and media are the areas where we have ventured farthest in today's education – but we can now go much farther. Today's electronic media offers means of conveying knowledge and, more importantly, understanding far more broadly and more potently than printed texts or class trips ever could. They are capable of being dynamic, immersive, multi-sensory, and hyper-extensible. All you need to do is look dispassionately at what's happening in computer and online

gaming to see the potential for Game Based Learning (“GBL”) in education. You don't have to like or approve of Grand Theft Auto to see the potential for this medium.

Which brings me to an actualization: How could we change what we do have into what we could have? That's where I'll start next time.

Richard Worzel is Canada's leading futurist who speaks to more than 20,000 business people a year. He is a former PTA president and a Scout leader. He volunteers his time to speak to high school students free of charge. You can reach him by email at futurist@futuresearch.com.

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Curricula

Roll A Coin Through the Curriculum

Unit 3: The War Years

Introduction

When we refer to the War years, it means the periods of 1914-1918 and 1939-1945. During the First World War, Canada became involved as part of the British Empire and managed to prove itself in a bloody conflict. In particular, the Canadians took the lead and prevailed in the Battle of Vimy Ridge, which in many ways, marked a turning point in the country's evolution on the global stage. The Canadians accomplished something its allies couldn't. In 1939, Canada declared war on another country for the first and only time in its history. Like the First World War, this second global conflict changed Canada and its people dramatically and irrevocably. War presents new and difficult challenges for nations and Canada was no exception. In the Second World War, Canadians were called upon to learn new skills, develop new strategies, to rely more on themselves and each other than ever before. Where the First World War marked Canada's debut on the world stage, the Second World War accelerated the country's industrial capacity, its spirit and independence... all at a terrible price.

General Outcomes/Expectations

Students will:

- Understand the impact of global war domestically and internationally
- Research the conditions and events that led to the first two world wars
- Gain insight into the economics of war
- Attempt to understand war through culture, specifically, visual arts and poetry
- Explore key issues such as conscription and what effect it had on the psyche of the country
- Work together cooperatively in teams
- Hone critical assessment and evaluation skills

Key Concepts and Issues

Students will explore why and how Canada was affected by its involvement in two world conflicts and what influence these events had on the evolution of the country.

WWI - 1914-19

© Teach Magazine

Activities

Junior (grades 4-6),
intermediate (grades 7-9) and
senior (grades 10-12)

Junior Level Activity

The War Years: Painting the Conflict

Duration

Three to four class periods

Equipment Required

art supplies, pens, paper, markers, pencils, computers with Internet access

Key Concepts

Students will:

- Research the history of Canadian art and war
- Research the artists who were sent overseas to document the war years
- Understand the role art plays in documenting wars
- Create a poster or visual display on a war-related theme or event
- Use critical thinking and analytical skills
- Apply knowledge to current events
- Work cooperatively in teams

Resources

www.canadianencyclopedia.ca/index.cfm?PgNm=TCE&Params=A1ARTA0008436

www.vac-acc.gc.ca/remembers/sub.cfm?source=collections/paintings

www.collectionscanada.ca/war-artists/index-e.html

Intro

Canada's War Art program officially began in 1916 by Lord Beaverbrook (Max Aitken). Artists in Canada and from around the world were commissioned to document the ongoing European conflict we know as the First World War. Some 800 works of art were produced as a result depicting civilians and the military, the battlefronts and conditions at home. The works of art that were produced, often under dangerous and difficult conditions, represent a valuable and all too human archive of the conditions surrounding warfare. The artists brought their own creativity and interpretation to the images they saw before them. As a result, an invaluable and poignant legacy was created and is available to those of us who have not experienced war firsthand. None of the commissioned works were exhibited while the First World War was ongoing but received public display after the War's end. Canada was also the first country to establish a war art program.



The Home Front Poster

© Teach Magazine

Discuss

Have a general discussion about art and its role as a vehicle for documenting events. War artists have played an important role during earlier

conflicts from history such as the American Civil War. So, the role of the war artist had already been well established.

Research

Students will research the history of Canadian War art.

Write

Students will summarize their research findings. Maximum length: one page

Select

Students will select a war artist from the list above (see Resources). Students will summarize the life and career of the war artist they have selected. Maximum length, one page.

Background

The Canadian War Museum (please see Web address in the Resources section) has divided up its exhibition on Canadian war art into different themes. The theme are as follows: Battle (images of conflict), Service (preparation and waiting for war), Work (those who aren't on the front lines but contributing to the war effort), Captivity/Casualties (those captured during ongoing battles and those wounded or killed, and Home/Leisure (what people on the home front were doing and taking time off from war).

Select

Students will select one of the above mentioned themes.

Design

Students will draw, paint, design, sketch their own visual image (painting, drawing, poster, cartoon etc.) based on the theme they have selected.

Write

Students will write a short narrative piece no more than two paragraphs in length describing their visual image, what it represents and its significance.

Present

Students will briefly present their images to the class.

Extension Activity

Form

Students will be placed in groups of three or four.

Discuss

The members of the group will discuss the visual image they have created with the other members. How do each of the images fit together? Can they tell a story?

Create

Using the images students have created, they will be pooled together to form a collage.

Write

Students will write some accompanying text describing their collage, its meaning and significance. Maximum length: ½ page.

Present

Each team will present its collage to the class and discuss its meaning and significance.

Intermediate Level Activity

The War Years: Symbols of War

Duration

Two to three class periods

Equipment Required

art supplies, paper, pens, markers, pencils, computers with Internet access

Key Concepts

Students will:

- Understand the sacrifice men, women and children make in war time
- Gain appreciation for Canada's role in major conflicts overseas
- Learn about Canadian war medals, their meaning and significance
- Learn about national symbols and their importance
- Design their own version of a war medal
- Explore the significance of national symbols
- Work cooperatively in teams
- Hone critical thinking and analytical skills

Resources

www.airmuseum.ca/web/ammq9911.html

www.quebecoislibre.org/010707-12.htm

www.histori.ca/peace/page.do?pageID=337

www.pch.gc.ca/progs/cpsc-ccsp/sc-cs/index_e.cfm

<http://fraser.cc/FlagsCan/Nation/NatSym.html>

Intro

There is a lot about war and the events surrounding war that are symbolic. In the evolution of any country or society, symbols play an important role. They act as a standard of meaning, an image that is representative of that country. And the symbol communicates a message. During periods of war and peace, a country's armies employs objects that act as symbols. There are flags and heralds and standards, even different sorts of arms boast symbols, the configuration of the handle of a sword or a design etched into the blade of a knife. The patches and medals worn by military personnel, even their uniforms represent rank and actions undertaken. That is, did they complete a certain course or program, commit a heroic act or deed, fulfill obligations and responsibilities to attain a certain rank and so on. Wherever we look in society, we see the world filled with symbols even if it is an icon on a computer or a text message. Within the realm of the military, however, and the theatre of war, symbolism is ever present and pervasive.



Tombac, nickel, 1943



The Defence of Britain medal
 Source: Veteran Affairs Canada

Discuss

Have a general discussion about symbols in our society. What are their purpose? What do they mean? Have students list as many symbols as they can think of and write them on the board. What about national symbols (flag, maple leaf, beaver etc.)? Can students list any of Canada's national symbols and if so, do they understand their significance?

Research

Students will use the resources list above and research Canada's national symbols. They will select two symbols.

Write

Using the research conducted on the two Canadian symbols, students will write a short summary of each describing the symbol and its significance. Maximum length: ½ page.



The War Medal, 1939-45
 Source: Veteran Affairs Canada

Draw

Students will select one of the symbols they have researched and draw it. The drawing must be in context, however. This means that the symbol shouldn't appear on its own but connected to something. For example, the maple leaf is a symbol and it should be drawn as it could appear on a flag, a plaque, a uniform etc.

Research

Using the resources listed above, students will research Canada's military medals and decorations.

Select

Students will select two of the military medals and decorations.

Write

Based on the research they have done, students will write a short summary of the two military medals or decorations they have selected stating the history and significance of each. Maximum length: ½ page.



Top: 2004 Silver Poppy Quarter

Bottom: 2005 Circulation Poppy Quarter

Extension Activity

1. In 1949, The Royal Canadian Mint struck two war medals, the Defence of Britain medal and the War Medal, 1939-45. The class will be divided up into teams of two or three students. Each team will research these medals and produce a short summary description of their history and significance, no longer than one page in length. The teams will then set about using all of the research they have done to date and design their own war medal. The medal may commemorate any conflict such as The First or Second World War, the Korean War, The Vietnam War or even a conflict currently afflicting the globe. Included with the concepts must be a brief explanation of the medal's significance. Students may also create a PowerPoint presentation displaying their research and medal concepts. The medal design will then be presented to the rest of the class.

Or:

2. Students, working in teams will read *In Flanders Fields*, a poem by Colonel John McCrae, a Canadian military surgeon who served during the First World War. It is one of the most famous war poems ever written. Based on how they perceive the poem, each student team will design a commemorative medal or coin that represents John McCrae's poem. Accompanying the design will be a narrative description of the coin or medallion talking about its meaning and significance. The designs will be presented to the rest of the class.

In Flanders Fields

By Colonel John McCrae



In Flanders fields the poppies blow
 Between the crosses, row on row
 That mark our place; and in the sky
 The larks, still bravely singing, fly
 Scarce heard amid the guns below.
 We are the Dead. Short days ago
 We lived, felt dawn, saw sunset glow,
 Loved and were loved, and now we lie
 In Flanders fields.
 Take up our quarrel with the foe;
 To you from failing hands we throw
 The torch; be yours to hold it high.
 If ye break faith with us who die
 We shall not sleep, though poppies grow
 In Flanders fields.

Senior Level Activity

The War Years: Reporting the War

Duration

Three to four class periods

Equipment Required

art supplies, pens, paper, markers, pencils, computers with Internet access

Outcomes / Expectations

Students will:

- understand the role of a war correspondent;
- gain appreciation for reporting during war time;
- learn how the media operate during war time;
- experiment with a variety of media to simulate war reporting;
- learn to critically assess media reports during war time;
- understand the difference between objective reporting and propaganda;
- work cooperatively in teams; and
- hone critical thinking and analytical skills.

Resources

www.cbc.ca/news/background/ve-day/correspondent.html

www.cmhg.gc.ca/html/glossary/default-en.asp?letter=W&t=&page=1

www.warmuseum.ca/cwm/newspapers/information_e.html

www.canada.com/topics/news/features/afghanistan/story.html?id=1f29d9bd-3499-4ec4-841f-83e267c65aad&k=73423&p=3

www.civilization.ca/pub/pub011.html

www.cbc.ca/news/reportsfromabroad/murray/20000529.html

www.publicaffairs.ubc.ca/ubcreports/2003/03feb06/flak_jacket.html

Introduction



In ancient times, war news was reported by messenger. Runners were sent by field commanders to deliver the news of a battle's outcome to an anxious ruler. Before the invention of electricity, war correspondents were sent to far-off battlefields and filed their reports via stagecoach, railroad or ship. When the battles were distant, the reports came slowly and the public received their information from newspapers that were rarely up-to-date on war events. The information was filtered through the eyes of the correspondent. Today, we live in an age of instantaneous news. Multiple news sources are available to us through a variety of media such as TV, computers and cell phones. When we receive information about combat do we think about who provides it? Do we understand what is required for war correspondents to report on dangerous and often tragic events? Should we take all the information presented to us at face value? How do we decide what to believe?

Canada Overseas

© Teach Magazine

Discuss

Have a general discussion about war and war correspondents. Ask students to talk about the role of the war correspondent and its importance. Is the public well-served by the war correspondent? If so, why? If not, why not?

Research

Using the resources listed above, students will research the history and the role of the war correspondent.

Write

Students will summarize their research findings. Maximum length: one page.

Form

Students will be placed in groups of three or four.

Review

Students will track war reporting over a period of a week. This activity includes watching the news on television, scanning news on the Internet, and clipping articles from newspapers or magazines.

Report

Students will report to the group on what they saw and read over a week's time. Each group will make a list of their observations noting the type of coverage, the use of images, the use of sound, the slant of the report, the role of the reporter and the effectiveness of the reporting.

Present

Each group will make an oral presentation to the class.

Extension Activity

1. Students, working in teams, will research the history of propaganda. Searching the Internet, they will select a period such as the Second World War and determine the role of propaganda in that conflict. How effective was propaganda? How did it influence civilian populations? How was propaganda used to influence public opinion? The group will put together a PowerPoint presentation for the class.

2. Student teams will write or videotape their own stories about war. The group will decide whether stories will be based on actual or fictitious events. Each team will determine what medium they will use. Print stories should be a maximum of three pages and must include photographs or illustrations. Video stories will run a maximum of two minutes and will emulate what is shown on television or the Internet. Student teams will present their war stories to the class.



*Première Guerre mondiale
1914-1918*

Curricula

Glissez une pièce au programme

Troisième cours : Les années de guerre

Liens avec le programme d'études

Évaluation

Rubrique

Activités

Activités pour les élèves des niveaux primaire (de la 4^e à la 6^e année), intermédiaire (de la 7^e à la 9^e année) et secondaire (de la 10^e à la 12^e année)

Introduction

L'expression « années de guerre » fait référence aux périodes 1914-1918 et 1939-1945. En tant que membre de l'Empire britannique, le Canada a pris part à la Première Guerre mondiale, un conflit sanglant où le Canada a quand même connu son heure de gloire. Plus précisément, les Canadiens sont passés à l'attaque et ont remporté la bataille de Vimy, qui a constitué, à bien des égards, un point tournant dans l'évolution du pays sur la scène mondiale. Les Canadiens ont accompli quelque chose que leurs alliés ne pouvaient faire. En 1939, le Canada a déclaré la guerre à un autre pays pour l'unique fois de son histoire. Comme dans le cas de la Première Guerre mondiale, ce deuxième conflit mondial a changé le Canada et ses habitants de manière radicale et définitive. La guerre soulève de nouvelles difficultés, souvent complexes, pour les pays, et le Canada n'y a pas fait exception. Pendant la Seconde Guerre mondiale, les Canadiens ont été appelés à acquérir de nouvelles compétences, à adopter de nouvelles stratégies et à compter sur eux-mêmes et sur les autres plus que jamais. Tandis que la Première Guerre mondiale avait marqué les débuts du Canada sur la scène mondiale, la Seconde a renforcé la capacité industrielle du pays, son esprit et son indépendance, mais il en a chèrement payé le prix.

Attentes et résultats

Les élèves pourront :

- comprendre l'incidence d'une guerre mondiale sur le pays et sur la scène internationale;
- faire des recherches sur les circonstances et les événements qui ont donné lieu aux deux premières guerres mondiales;

- comprendre l'économie de guerre;
- essayer de comprendre la guerre grâce à la culture, plus précisément les arts visuels et la poésie;
- examiner des questions clés comme la conscription et son effet sur l'état d'esprit du pays;
- travailler en équipe;
- perfectionner leurs compétences en évaluation et améliorer leur raisonnement critique.

Concepts et questions clés

Les élèves trouveront comment et pourquoi la participation du Canada à deux conflits mondiaux a eu des répercussions sur le pays et ils détermineront l'influence que ces événements ont eue sur l'évolution du pays.

Activité pour les élèves du niveau primaire

Les années de guerre : Peindre le conflit

Durée

Trois ou quatre périodes de cours

Matériel requis

Fournitures artistiques, stylos, papier, marqueurs, crayons, ordinateurs avec accès à Internet

Attentes et résultats

Les élèves pourront :

- comprendre l'histoire de la guerre et de l'art de guerre au Canada;
- effectuer des recherches sur des artistes qui ont été envoyés outre-mer pour documenter les années de guerre;
- comprendre le rôle que jouent l'art en documentant les guerres;
- créer une affiche ou une présentation visuelle sur un thème ou un événement se rapportant à la guerre;
- mettre à profit leurs compétences en analyse et en raisonnement critique;
- appliquer leurs connaissances aux événements actuels;
- travailler en équipe.

Ressources

www.civilization.ca/cwm/disp/dis010_f.html

www.vac-acc.gc.ca/remembers/sub.cfm?source=collections/paintings

www.collectionscanada.ca/war-artists/index-f.html

Introduction



Affiche Sur le front intérieur

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Le programme *L'art de guerre canadien* a été lancé officiellement en 1916 par Lord Beaverbrook (Max Aitken). Des artistes du pays et du monde entier ont été chargés de documenter la Première Guerre mondiale alors en cours en Europe. Ainsi, quelque 800 œuvres d'art représentant des civils et des militaires, les fronts de bataille et les conditions au pays ont été produites, souvent dans des circonstances dangereuses et difficiles. Elles constituent des archives précieuses des conditions de guerre, où l'élément humain est malheureusement en proie à la souffrance. Les artistes ont mis à profit leur propre créativité et leur interprétation des images dont ils ont été témoins, créant ainsi un héritage précieux et poignant dont peuvent bénéficier ceux d'entre nous qui n'ont pas connu la guerre. Aucune des œuvres commandées n'a pas été exposée pendant la Première Guerre, mais elles l'ont été après la guerre. Le Canada a été le premier pays à établir un programme sur l'art de guerre.

Discuter

Tenez une discussion générale sur l'art et son rôle en tant que moyen de documenter les événements. Les peintres de guerre ont joué un rôle important pendant les premiers conflits de l'histoire, comme la guerre de Sécession. Le rôle du peintre de guerre était donc déjà bien établi.

Effectuer des recherches

Les élèves effectueront des recherches sur l'histoire de l'art de guerre.

Rédiger

Les élèves résumeront les résultats de leurs recherches (une page au maximum).

Sélectionner

Les élèves sélectionneront un peintre de guerre dans la liste ci-dessus (voir Ressources). Ils résumeront la vie et la carrière du peintre qu'ils ont choisi (une page au maximum).

Contexte

Le Musée canadien de la guerre (voir l'adresse du site Web dans la section Ressources) a regroupé les œuvres d'art d'après différents thèmes : le combat (images de conflit), le service (préparation et attente en vue de la guerre), le travail (travailleurs qui ne sont pas au front mais qui contribuent à l'effort de guerre), la captivité et la mort (les militaires capturés pendant les batailles et ceux blessés ou tués), et le foyer et les loisirs (ce que faisaient les personnes au Canada et les soldats en permission).

Sélectionner

Les élèves sélectionneront l'un des thèmes susmentionnés.

Concevoir

Les élèves concevront, dessineront, peindront et esquisseront leur propre image visuelle (peinture, dessin, affiche, bande dessinée, etc.) selon le thème qu'ils auront choisi.

Rédiger

Les élèves rédigeront un court texte narratif où ils décriront leur image visuelle, ce qu'elle représente et son importance (deux paragraphes au maximum).

Présenter

Les élèves présenteront brièvement leur œuvre à la classe.

Activité complémentaire

Répartir

Divisez la classe en groupes de trois ou quatre élèves.

Discuter

Les membres du groupe discuteront entre eux de l'image visuelle qu'ils auront créée avec les autres membres. Les images concordent-elles? Peuvent-elles être regroupées pour raconter une histoire?

Créer

On regroupera les images créées par les élèves pour en faire un collage.

Rédiger

Les élèves rédigeront un texte d'accompagnement décrivant leur collage, sa signification et son importance (une demi-page au maximum).

Présenter

Chaque équipe présentera son collage à la classe et discutera de sa signification et de son importance.

Activité pour les élèves du niveau intermédiaire

Les années de guerre : Symboles de la guerre

Durée

Deux ou trois périodes de cours

Matériel requis

Fournitures artistiques, papier, stylos, marqueurs, crayons, ordinateurs avec accès à

Attentes et résultats

Les élèves pourront :

- comprendre le sacrifice que les hommes, les femmes et les enfants font en temps de guerre;
- saisir le rôle du Canada dans les grands conflits d'outre-mer;
- s'informer sur les médailles de guerre canadiennes, leur signification et leur importance;
- apprendre quels sont les symboles nationaux et connaître leur importance;
- concevoir leur propre version d'une médaille de guerre;
- étudier l'importance des symboles nationaux;
- travailler en équipe;
- perfectionner leurs compétences en analyse et améliorer leur raisonnement critique.

Ressources

http://www.vac-acc.gc.ca/remembers_f/sub.cfm?source=collections
www.airmuseum.ca/web/ammq9911.html (en anglais seulement)

www.quebecoislibre.org/010707-12.htm (en anglais seulement)

<http://www.histori.ca/peace/theme.do?themeID=2>

www.pch.gc.ca/progs/cpsc-ccsp/sc-cs/index_f.cfm

<http://fraser.cc/FlagsCan/Nation/NatSym.html> (en anglais seulement)

Introduction



Tombac, pièce de cinq cents, 1943.

Beaucoup de choses à propos de la guerre et des événements qui l'entourent sont symboliques. Les symboles jouent un rôle important dans l'évolution de tout pays ou de toute société. En plus de revêtir une signification codifiée, le symbole constitue une image représentative du pays. Le symbole communique aussi un message. En période de guerre ou de paix, l'armée d'un pays emploie des objets qui font office de symboles, par exemple, des drapeaux, des hérauts et des étendards. Différentes armes revêtent des symboles, comme la configuration de la poignée d'une épée, ou un motif gravé dans la lame d'un couteau. Les médailles et les dossards portés par les militaires, même leur uniforme, représentent leur rang et leurs réalisations, indiquant notamment s'ils ont suivi un certain cours ou programme, accompli un acte héroïque,



*Médaille de la Défense
de la Grande-Bretagne*

Source : Anciens Combattants



Médaille de la Guerre de 1939-1945

Source : Anciens Combattants

Canada

ou réalisé un exploit, rempli des obligations ou assumé certaines responsabilités pour atteindre un certain rang. Où que nous regardions dans la société, nous voyons un monde rempli de symboles, qu'il s'agisse d'un icône à l'ordinateur ou d'un message texte. Dans le domaine militaire et dans le théâtre de la guerre, le symbolisme est omniprésent.

Discuter

Tenez une discussion générale sur les symboles dans notre société. Quel est leur objectif? Que signifient-ils? Demandez aux élèves d'énumérer autant de symboles que possible et inscrivez-les au tableau. Qu'en est-il des symboles nationaux (drapeau, feuille d'érable, castor, etc.)? Les élèves peuvent-ils nommer des symboles nationaux du Canada et, le cas échéant, comprennent-ils leur importance?

Effectuer des recherches

À partir de la liste de ressources ci-dessus, les élèves feront des recherches sur deux symboles nationaux du Canada.

Rédiger

En se servant des recherches réalisées sur les deux symboles canadiens choisis, les élèves rédigeront un court texte, décrivant chaque symbole et précisant son importance (une demi-page au maximum).

Dessiner

Les élèves dessineront l'un des symboles sur lesquels ils auront fait des recherches. Le dessin devra toutefois être fait en contexte. Le symbole ne devrait donc pas apparaître seul, mais se rattacher à quelque chose. Par exemple, la feuille d'érable devrait apparaître sur un drapeau, une plaque, un uniforme, etc.

Effectuer des recherches

À l'aide des ressources susmentionnées, les élèves feront des recherches sur les médailles et les décorations militaires du Canada.

Sélectionner

Les élèves sélectionneront deux médailles ou décorations militaires.

Rédiger

À la lumière de leurs recherches, les élèves rédigeront un court résumé sur les deux médailles ou décorations militaires qu'ils auront choisies en indiquant l'histoire et l'importance de chacune (une demi-page au maximum).



Pièce de 25 cents de circulation, le Coquelicot - la première pièce de circulation colorée au monde

Activités complémentaires

1. En 1949, la Monnaie royale canadienne a produit deux médailles de guerre, soit la médaille de la Défense de la Grande-Bretagne et la médaille de la Guerre de 1939-1945. La classe sera divisée en équipes de deux ou trois élèves. Chaque équipe fera des recherches sur ces médailles et résumera leur histoire et leur importance (une page au maximum). Les équipes utiliseront alors toutes les recherches qu'ils ont effectuées pour concevoir leur propre médaille de guerre, qui pourra commémorer un conflit comme la Première ou la Seconde Guerre mondiale, la guerre de Corée, la guerre du Vietnam ou même un conflit en cours. Ils devront inclure dans le concept de leur médaille une brève explication de son importance. Les élèves pourront également préparer un exposé PowerPoint où ils montreront les résultats de leurs recherches et leur concept de médaille. Le motif de la médaille sera ensuite présenté au reste de la classe.

Ou :

2. En équipe, les élèves liront le poème intitulé *Au champ d'honneur*, du colonel John McCrae, chirurgien militaire canadien qui a servi pendant la Première Guerre mondiale. Il s'agit de l'un des poèmes de guerre les plus célèbres qui soient. Selon la façon dont elle perçoit le poème, chaque équipe d'élèves concevra une médaille commémorative ou une pièce illustrant le poème de John McCrae. L'équipe décrira également la pièce ou le médaillon faisant état de sa signification et de son importance. Les motifs seront présentés au reste de la classe.

Au champ d'honneur

[Adaptation signée Jean Pariseau, CM, CD, D.ès L. (histoire)]

Au champ d'honneur, les coquelicots



Sont parsemés de lot en lot
Auprès des croix; et dans
l'espace
Les alouettes devenues lasses
Mêlent leurs chants au
sifflement
Des obusiers.
Nous sommes morts,
Nous qui songions la veille
encor'

À nos parents, à nos amis,
C'est nous qui reposons ici,
Au champ d'honneur.
À vous jeunes désabusés,
À vous de porter l'oriflamme
Et de garder au fond de l'âme
Le goût de vivre en liberté.
Acceptez le défi, sinon
Les coquelicots se faneront
Au champ d'honneur.

Activité pour les élèves du niveau secondaire

Les années de guerre : Le correspondant de guerre

Durée

Trois ou quatre périodes de cours

Matériel requis

Fournitures artistiques, stylos, papier, marqueurs, crayons, ordinateurs avec accès à Internet

Attentes et résultats

Les élèves pourront :

- comprendre le rôle d'un correspondant de guerre;
- se familiariser avec le journalisme de guerre;
- apprendre le mode de fonctionnement des médias en temps de guerre;
- faire l'expérience de divers médias pour simuler des reportages de guerre;
- apprendre à évaluer d'un œil critique les reportages des médias en temps de guerre;
- comprendre la différence entre un reportage objectif et la propagande;
- travailler en équipe;
- acquérir le sens critique et des compétences en analyse.

Ressources

www.cbc.ca/news/background/ve-day/correspondent.html (en anglais seulement)
<http://www.cmhg.gc.ca/html/glossary/default-fr.asp?letter=W&t=&page=1>
<http://http://www.civilisations.ca/pub/pub011.html> www.cbc.ca/news/reportsfromabroad/murray/20000529.html (en anglais seulement)
www.publicaffairs.ubc.ca/ubcreports/2003/03feb06/flak_jacket.html (en anglais seulement)

Introduction

Autrefois, les nouvelles étaient communiquées par un messenger. Le commandant des opérations envoyait un courrier faire connaître l'issue d'une bataille au souverain, qui se rongeaient d'inquiétude. Avant l'invention de l'électricité, les correspondants de guerre travaillaient au front et envoyaient leurs reportages par diligence, train ou bateau. Lorsque les batailles se déroulaient au loin, les reportages prenaient du temps à se rendre et la population était informée par les journaux, qui disposaient rarement d'information à jour sur les événements. L'information était alors filtrée par la perspective du correspondant. Nous vivons aujourd'hui à l'ère des nouvelles instantanées. Nous avons accès à plusieurs sources d'information grâce à une panoplie de moyens de communication, par exemple, la télévision, l'ordinateur et le téléphone cellulaire. Lorsque



Le Canada outre-mer

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nous recevons de l'information sur des combats, est-ce que nous pensons à ceux qui la communiquent? Sommes-nous conscients de ce que les correspondants de guerre doivent faire pour préparer leurs reportages sur des événements dangereux souvent tragiques? Devrions-nous prendre au pied de la lettre tous les renseignements qui nous sont présentés? Comment pouvons-nous déterminer ce qu'il faut croire?

Discuter

Organisez un débat général sur la guerre et les correspondants de guerre. Demandez aux élèves de parler du rôle du correspondant de guerre et de son importance. Le public est-il bien servi par les reporters sur le terrain? Quelle que soit son opinion, l'élève devra développer sa pensée.

Faire des recherches

En utilisant les ressources susmentionnées, chaque élève fera des recherches sur l'histoire et le rôle du correspondant de guerre.

Rédiger

Les élèves résumeront les résultats de leurs recherches (une page au maximum).

Former des équipes

L'enseignant divisera la classe en groupes de trois ou quatre élèves.

Examiner

Les élèves consacreront une semaine à l'étude du journalisme de guerre. Dans le cadre de cette activité, ils écouteront les nouvelles à la télévision, les consulteront sur Internet et découperont des articles dans les journaux ou les magazines.

Faire un compte rendu

Les élèves feront un exposé au groupe sur ce qu'ils auront vu et lu pendant la semaine. Chaque groupe dressera une liste d'observations en précisant le type de couverture, en indiquant s'ils ont eu recours à des images ou à des enregistrements audio, en précisant l'orientation du compte rendu et le rôle du reporter ainsi qu'en évaluant l'efficacité du reportage.

Présenter

Chaque groupe fera une présentation orale à la classe.

Activité complémentaire

1. En équipe, les élèves feront des recherches sur l'histoire de la propagande. Ils choisiront une période précise, par exemple, la Seconde Guerre mondiale, et exploreront Internet pour déterminer le rôle de la propagande dans ce conflit. Dans quelle mesure était-elle efficace? Quelle influence a-t-elle eue sur les populations civiles? Comment s'est-on servi de la propagande pour influencer l'opinion publique? Le groupe préparera un exposé PowerPoint pour la classe.

2. Chaque équipe préparera son propre reportage de guerre sur un événement réel ou fictif. Elle déterminera le support utilisé, par exemple, l'écrit ou la vidéo. Les reportages écrits devraient comporter trois pages au maximum et renfermer des photographies ou des illustrations. Les reportages vidéo devraient durer deux minutes au maximum et s'inspirer de ceux que l'on voit à la télévision ou sur Internet. Les élèves présenteront leurs reportages de guerre à la classe.

Dan Lang



Orly Draw a Story

<http://www.learningvillage.com/html/rorly.html>

Orly Draw a Story is a unique combination of a storytelling and story-creating program with a visual arts element, that is all about creating stories with pictures.

You are introduced to a young girl, named Orly in her homeland of Jamaica. Orly is a playful character who loves to tell stories. As she tells her stories (four stories in all), users are invited to create pictures that go with various parts of the story. The pictures can be created from scratch using the on-screen art centre or using templates that allow the user to construct a visual scene.

The people and objects drawn actually come to life (talk and move in the case of people) and are immediately incorporated into the story. The animated eyes and mouth of the character the user makes a drawing around are actually responding to the drawing movements. This is a unique aspect of the program's design, and has to be seen on the screen to be fully appreciated.

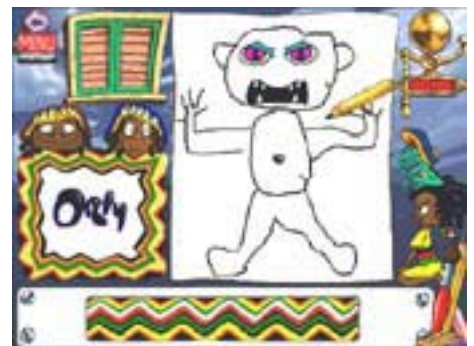
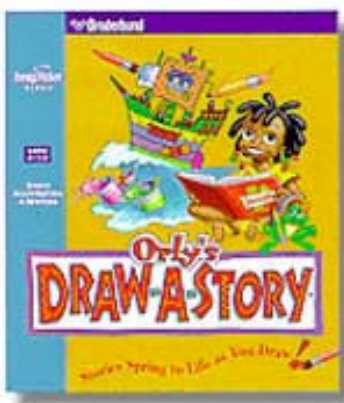
Anything the user draws becomes immediately incorporated in the story. So as the story progresses a host of characters are being added to the story. If the user likes the results by the end of the story, it can be saved, changed later if desired, and replayed anytime at the "Junkyard Drive-In Theatre" for the user's own enjoyment or for "show and tell". The program also has a Story Book Maker that allows the user to write stories and add proprietary visual images and music to complement the story created.

The program provides all kinds of story starters to get the user going on creating a story. These stories can be saved as well as printed. The program also has a "doodle pad" where the user can practice and develop your drawing skills.

If you have students who love stories and drawing pictures, this will encourage them to take the first step of creating pictures with

words on his or her own and then progressing to creating full stories with both narrative and pictures together. This program can be highly engaging for boys and girls alike, even though the character of Orly is female.

Dan Lang is the founder of Learning Village (www.learningvillage.com), an independent review and advisory centre for parents and teachers looking for information on educational software. You may contact Dan by email at dan@dlang.com.



Publisher: Educational Simulations

Age Range: 5-10 years
Grades: K-4

Minimum Computer Requirements:
Windows 95 or Mac OS 7.1



Embracing Handheld Devices as Educational Tools

By Carmen Berg

Handheld devices such as personal digital assistants (PDAs) or iPhones equipped with additional features like digital photography and video capabilities, GPS MP3 players along with various probeware can assist in promoting an educational experience that is individualized and customized within the framework of provincially mandated curriculum and personal learning goals. Already recognized by the video game industry as edutainment, handheld devices have enormous, untapped, educational potential.

Instead of banning these interactive, portable and inexpensive devices, some educators have embraced these technological tools. This mobile learning (m-learning) is possible because the majority of students have access to it. Moreover, these powerful mini-computers have advantages over traditional lap and desktop systems and, according to an ever-growing body of research, can positively impact student achievement.

According to a recent survey by CTIA and Harris Interactive, approximately 80% of teens carry a cell phone while nearly half of kids aged 8-12 do the same. Due to the ability to text message, easily browse the web and access social networking tools like MySpace and Facebook, handheld devices appeal to youth. Cited by almost 50% of youth as being the key to their social lives, these devices are also useful computers. Most have the computing power of a mid-1990s personal computer while consuming less than 1/100 of the energy.

Widely available and ranging in price from 100 to 600 dollars, these technologies allow for adaptive digital content with rapid,

inexpensive updates in place of costly, hard copy textbooks and static curriculum. Like the Nintendo DS[®], these inexpensive, portable devices are the ideal platform for learning on-the-go.

Handheld devices have several distinct advantages over traditional desktop or laptop configurations. Due to their size, they are highly mobile and can be taken virtually anywhere. This is especially important for field trips and off-site excursions. Cheaper and lighter than both lap and desktops, they have a longer battery life and usually can be turned on and off immediately. The various connections – WiFi, infrared or blue-tooth – easily allow for sharing of data and project collaboration be it student-student or student-teacher. These devices, it seems, give students access to tools and data anytime, anywhere.

According to *Technological Horizons in Education* (March 2006), handheld devices increase motivation, encourage

Embracing Handheld Devices as Educational Tools

networking and cost-effectively improve test scores while other research found that the use of handhelds made learners feel more in control, raised their confidence and self-esteem (Attewell, 2005). Other benefits included, improved independent working, enhanced motivation, improved focus, engagement and interest in tasks, while increasing skills in device operation. Using these devices also gave learners more freedom to express themselves without the need for constant supervision.

It is this ability to impact student learning and achievement that is most significant for educators and the students they teach. Useful in and out of the classroom, handheld devices can dramatically decrease teacher workload by eliminating the need for transference of paper and pen data to a digital recording environment. Whether it's tracking attendance, homework completion rates or grading, these technological tools can improve efficiency and are an excellent tool for communicating up-to-date information about a student's progress in a confidential and paperless way.

Handheld devices also hold promise in tracking and assessing each learner's progress. For example, the Keller Instructional Handheld Data (KIHD) System is being used by teachers to observe the improvements made in academic behaviour and performance. "The ability to capture performance data allows teachers to make instructional decisions faster," according to Catherine Ferraro from George Mason University. Furthermore, handheld devices can be used in the managing of cooperative learning assignments and the evaluation of student presentations. Within the special needs environment, handheld devices can assist in improving communication (Faux, McFarlane, Roche and Facer, 2006).

For instructional delivery, handheld devices equipped with short text messages (SMS) can be used to conduct pop quizzes, spelling and math tests similar to fan voting on Canadian Idol. The devices can be used to poll students' opinions and make learners aware of current events for class discussion. Depending on the screen resolution, handheld devices can be used to display useful animations in subjects like anatomy, forensics, or chemistry. When equipped with the ability to take high-resolution digital photographs, camera phones can be used for scientific data collection, documentation and visual journalism. Video equipped devices can assist in television journalism and creative moviemaking. Short video clips or podcasts can help illustrate

"For instructional delivery, handheld devices equipped with short text messages (SMS) can be used to conduct pop quizzes, spelling and math tests similar to fan voting on Canadian Idol. The devices can be used to poll students' opinions and make learners aware of current events for class discussion."

effective and ineffective behaviours relating to ethics, negotiation and other subjects and "students are more receptive to the learning material in the form of a podcast than a traditional lecture or textbook" (Evans, 2008). GPS-equipped units can be utilized for programs in orientation, and have applications in geography, archeology, architecture, science and mathematics. Furthermore, Web-enabled devices make excellent research tools with on-demand dictionaries, thesaurus and encyclopedia in the palm of each hand.

While an instructor can benefit from utilizing a handheld device for record-keeping or as an instructional tool, students can use them too. From the recording of homework assignments or project deadlines to extracurricular commitments and work demands, handheld devices offer the ability to self-monitor and students gain confidence by using technology familiar to them. In South Africa, Nokia© 6300 mobile phones are being used to help grade 10 girls improve

their mathematics performance. In Japan, Nintendo DS© is being used as a tool for English language instruction. For special needs students, handheld devices can be programmed to notify the owner when certain medication should be taken or when to go to certain classes. For the blind, cell phones can be equipped with special text to speech software and for second language students, these devices can translate speech on the fly. Additional features like digital photography allow students to gather evidence, collect and classify images and follow progressions over time. These devices may be operated remotely and allow for observations that would be difficult, if not impossible, in person. Video-equipped devices can aid in collecting and analyzing data, creating short movies, recording a presentation or timing science experiments. GPS-enabled devices allow students to search for things and places known as geo-caching.

These mobile learning tools also aid in test preparation and test taking. Companies are using handheld devices to offer cell-phone-delivered test-preparation questions while Presbyterian Ladies' College in Croydon, Australia is allowing students to use the Internet or phone a friend during exams to collect information.

"Teachers need to understand that using this technology is not in addition to but rather instead of what they were doing before," says one learning specialist from the Calgary Board of Education. To implement these powerful tools however, teachers require appropriate professional development opportunities

Embracing Handheld Devices as Educational Tools

as well as timely technical support. While handheld devices are effective for some educational uses, it is imperative that the purpose, instructional goal and available technical support are understood at the outset. Once defined, an instructor must then find cost-effective, useful software to achieve the desired outcome (see sidebar with free and shareware programs). Administrative decisions concerning distribution, support and management must be addressed beforehand as well. Additional in-class issues such as battery life and bandwidth issues must be considered. Careful planning is necessary. This avoids idle Internet surfing that saps battery life and ensuing traffic jams like everyone trying to print at once. For Heidi Samuelson, a teacher at Oak Elementary school, Shelby County, Tennessee, the podcasts her students create, using digital photography, motivate them to do their best work. "They visit our website often to practice high frequency words, re-read stories, and they even come up with ideas of how they can create power point presentations or movies with our pictures," she says.

Beyond cost and budgetary constraints, factors that should be considered when selecting a handheld device for the classroom include the size, readability, clarity and colour of the display screen, the amount or size of internal memory to run programs, the availability of memory storage slots, built-in networking capability, additional features like infrared port, headphone jack and microphone jack and external infrared or Bluetooth keyboard.

Recent studies indicate that utilizing mobile devices boosts motivation, increases math scores (Learning and Technology Scotland 2008) and has immediate and dramatic improvements in reading skills (NCLB project "Bridging the Disconnects). In addition, students are able to show heightened awareness and technical know-how for ICT outcomes. While critics suggest that the drawback of these mobile devices is that they can be a huge distraction and can fuel cyberbullying, law enforcement personnel warn that carrying mobile devices heightens the risk of being mugged. It is imperative therefore that teachers, students and the wider community work together to develop policies that enable these powerful new learning tools to be used safely. Handheld devices can be a students' interface to a variety of computing devices and are well-suited for a wide range of tasks. It is their size, mobility and power that can be effectively and efficiently exploited in today's classroom.

*Carmen Berg is a contributing author for **Physics** published by Pearson Education Canada and a regular contributor for **Calgary's Child**. She can be reached at ccrberg@hotmail.com*

<http://k12handhelds.com/>

<http://www.concord.org/work/themes/handhelds.html>

<http://www.pdaed.com/vertical/home.xml>

http://www.education-world.com/la_tech/tech083.shtml

<http://palminfo.8m.com/>

<http://mit.concord.org/>

<http://pegasus.cc.ucf.edu/~ucfcasio/qvuses.htm>

<http://school.discoveryeducation.com/schrockguide/gadgets.html>

<http://www.learninginhand.com/>

<http://www.willard.k12.mo.us/coltech/handheld/activit.htm>

<http://handheldcomputers.blogspot.com/>

<http://www.tea.state.tx.us/technology/techapp/instruct/general/handheld.htm>

<http://www.judybrown.com/mobileresources.html>

<http://www.learning2go.org/?tr=y&auid=4165091>

<http://www.mscapers.com/?tr=y&auid=4165093>

PRINT RESOURCES:

Mlearning: Mobile Learning And Performance in the Palm of Your Hand
by David Metcalf

Mobile Learning Communitites: Creating New Educational Futures by Patrick Danaher

Handheld Technologies for Mobile Learning by Di Dawson

Mobile Learning: A Handbook For Educators and Trainers by Kukulska-Hulme

Augmented Learning: Research and Design of Mobile Educational Games by Eric Klopfer

Innovative Mobile Learning: Techniques and Technologies by Ryu

ONLINE RESOURCES



Teaching Hearing Impaired Children

By Ron Doorn

Introduction

Statistics Canada shows hearing loss as the largest chronic disability in North America and that hearing loss is the fastest growing disability because of our aging population and increased noise pollution. There is 10% of the Canadian population that has some degree of hearing loss meaning 2.5 million people in Canada and 100,000 in Saskatchewan. Statistics Canada also shows that 15% of the child population may be educationally handicapped by otitis media in the first two years of life. In the United States, “There are 16 to 30 times more hard of hearing than deaf children, and it is commonly accepted that the prevalence of deaf persons is about 1 per 1000 of the general population” (Ross, Beckett, & Maxon, 1991). “There are substantially more children, however, with slight hearing losses whose hearing difficulties are noted only under poor acoustic conditions” (Hall, Oyer, & Haas, 2001, p.128). Therefore many teachers will have to address hearing loss in their classroom.

Hearing is what keeps us in touch with our world. It plays a significant role in expressing and receiving language. Hearing loss creates problems in how an individual expresses and receives

language in turn causing social, communication, and educational problems (Hall, Oyer, & Haas, 2001). Educators therefore need to seriously consider the short and long term affects of how hearing loss impairs a person’s ability to understand spoken language when developing their programs. “Because language comprehension, production, and use are fundamental to social and academic success, children with language disorders are at risk for problems in social adaptation and learning in school (Bashir, Wiig, & Abrams, 1987, p. 53). The short/long term effects of hearing loss make hearing-impaired children academically and sociably vulnerable while attending schools where they’re preparing to forge their place in society. It is only through collaboration with the child, the child’s family, and the specialists that educators can adapt programming to implement alternative forms of communication like sign language, lipreading, visual aids, listening devices, and so forth. The child (mainly middle years and up) should also have input in decisions regarding adaptations for his/her educational program.

The following paper addresses current issues concerning hearing loss, the involvement/perspectives of families and individuals deal-

ing with hearing loss, and offers practical strategies for classroom teachers.

Screening Procedures

Early intervention of hearing loss can prevent a bundle of secondary problems like behavioural cases that sometimes derive from undetected hearing losses. Present technology is capable of testing infants even though they can't articulate whether they hear a sound or not as required on the traditional audiometer used for children from Grades K-12. "A widely used technique called Otoacoustic Emissions (OAE) is quick, efficient, and now routine in testing newborns (Hall, Oyer, & Haas, 2001, p.134). Another technique used for infants is the Auditory Brainstem Response (ABR) (Hall, Oyer, & Haas, 2001, p.134).

Screening tympanometry is used in addition to the audiometer to detect middle ear functions via changing air pressures. The tympanometry test is beneficial in detecting slight conductive hearing losses that might otherwise be missed by an audiometer test (Hall, Oyer, & Haas, 2001, p. 135).

Current Issues Concerning Hearing Loss

Research shows that while middle ear problems are the leading cause of hearing problems in children, the effects of aging and noise exposure are largely responsible for hearing loss in adults (Hall, Oyer, & Haas, 2001, p.126). Health professionals, however, are concerned about the impact of the "boom box" on ears of persons under 18 (Alpiner & McCarthy, 1993). Research shows that hearing loss for this age group is increasing because of people playing music at high volumes (Chermak & Peters-McCarthy, 1991). In order to counteract this problem, hearing conservation programs that publicly educate children about the dangers of noise exposure are recommended (Hall, Oyer, & Haas, 2001).

Children having central auditory processing problems, where they don't have problems with their hearing mechanics but rather with their brain processing sound, are often labeled "as having behaviour problems before they are diagnosed otherwise" (Hall, Oyer, & Haas, 2001, p.127). As a result, inappropriate therapeutic goals are developed for these children that only exacerbates the problem. Cases like these emphasize that teachers rely on specialists to make the diagnosis and to help develop effective intervention plans for the child. It makes better sense for the teacher to take the time to make the appropriate referrals and have the child properly tested/diag-

nosed rather than rashly labeling the child possibly causing long-term damage.

Based on research by Kadervak and Pakulski (2002), there have also been problems in not identifying children with minimal hearing loss (MHL) despite the hearing screening tests provided at schools. Those children that fall close to the recommended hearing level are often passed through the screening. In cases like otitis media, a child can pass the screening but experience hearing loss later and not be considered as hearing impaired because of passing the hearing test earlier. Further research reveals the effects of MHL are profound, especially during the formative years (Bess, 1999). There are higher levels of language delay and impairment in children with MHL (Finitzo-Hieber, 1981). Children with MHL demonstrate less motivation, and sometimes become irritated when listening to auditory information (Newman, Hug, Jacobson, & Sandridge, 1997). Background noise probably has the greatest effect on the hearing ability of children with MHL (Anderson, 1999). Unfortunately, the "standards for classroom acoustics" aren't so readily addressed in the schools (Kaderavek, 2002, p.14). They are, however, addressed by laws under the Individuals with Disabilities Act (IDEA), the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) that mandate all children having "the right to acoustic accessibility in the classroom" (Kaderavek, 2002, p.14). Evidently, there exists a conflict of interest that needs attending to in order to better implement the special support services that may require structural or renovative changes beyond the teachers' capacity and well within reason of the administrative budget.

Presently, there is controversy over what are the most effective methods for deaf or hard of hearing students to use for communicating. The deaf community has urged schools to accept manual approaches (sign language) over oral approaches (speech and lipreading). "The Oralists fear the use of sign language will impede oral language and speech acquisition, while manualists claim the oral approach is often impractical and too difficult for most deaf persons to master" (Hall, Oyer, & Haas, 2001, p.138). The controversy consists of two opposing views described by Hall, Oyer, and Haas (2001) as the oralist view "that our brains are wired" to learn language by hearing it only, meaning treatment for children with hearing loss is to maximize their auditory capabilities. The manualists however, "contend that forcing deaf children to communicate only through speech and lipreading denies them full and successful communication through sign language, an efficient communication mode for them" (Hall, Oyer, & Haas, 2001, p.138). An alternative approach that de-

"Early intervention of hearing loss can prevent a bundle of secondary problems like behavioural cases that sometimes derive from undetected hearing losses. Present technology is capable of testing infants even though they can't articulate whether they hear a sound or not as required on the traditional audiometer used for children from Grades K-12."

rived from this controversy is called “Total Communication” that simultaneously uses sign language and auditory-oral methods (Hall, Oyer, & Haas, 2001, p.138).

There is also controversy with American Sign Language (ASL) because it is a language of its own, apart from English. There is concern that a deaf child only using sign language will not know English and then will not be able to read and write English (Hall, Oyer, & Haas, 2001). As a result, sign codes have been developed to bridge ASL and English by using English grammar and vocabulary structures. The simultaneous use of ASL and sign codes is called Pidgin.

Another therapy that is on the rise is cochlear implants that SLPs need to be well educated and current in order to be most effective when consulting with educators about student support. “To date, relatively few are considered good candidates” for cochlear implants (Hall, Oyer, & Haas, 2001, p. 145). Those considered, are mainly people “who have known normal hearing and acquired profound losses later” because they’ll have formative language development in place (Hall, Oyer, & Haas, 2001, p.145). Cochlear implants differ from typical hearing aids in that they don’t amplify sound but rather “change sound into electrical current that is sent to the inner ear” making what the child hears quite different from what a child with a hearing aid hears (Hall, Oyer, & Haas, 2001, p.145). Cochlear implants have potential complications from the required surgery that sometimes results in the body rejecting the implant or in painful infections. There are the high medical costs of the procedure and the travel to specialists’ appointments in other cities that also need to be factored into the equation before subjecting a child to cochlear implant therapy. Cochlear implants are not for everybody and those considering it need to take ample time to thoroughly research the therapy with the child to ensure it best suits the child’s needs.

Involvement and Perspectives of Individuals, Their Families, or Formal Caregivers

Research done by Suzette V. Garay (2003), a Clinical Assistant Professor at the University of Wisconsin, found that many deaf students were not active participants in decisions regarding their educational program that affected their transition from high school to adult life. Garay interviewed many deaf students that stated they didn’t have much say in their programming. Those students that were invited to IEP meetings had problems understanding or following the process because of their communication difficulties. One deaf student stated, “Everyone was making decisions for me and I was too angry to say anything during the meetings” (Garay, 2003, p.47). Garay states, “Deaf students often lack instruction in advocating for themselves during transition planning; this lack of skills limits their opportunities for additional academic and vocational training” (p. 47). This becomes a serious issue when considering today’s job market that centers heavily on communication and language, and “self-advocacy” skills. Garay’s research reveals many deaf students stating, “that they had no role models and felt that no one really understood their needs or interests” (p. 46). Other research revealed parents having mixed feelings about professionals they encountered in rela-

tion to their child’s hearing loss. One parent stated, “Most were sincere in their efforts to help us but many fell short of providing us with an objective point of view based on our own family dynamics. In some cases, the lack of objectivity was due to ignorance of deaf issues” (MacKenzie, 1999, p.25). Many families with hearing impaired children stated that they obtained more support through the deaf community. It would therefore be wise for educators to step outside their agency and seek additional support through strong partnerships with other community agencies like the Saskatchewan Deaf and Hard of Hearing Services Incorporated (SDHHS) that specialize in this area. Agencies like SDHHS offer the following services: updated information, resources, interpreting, oral facilitation, computerized notetaking, vocational rehabilitation and career counseling, and community services assistance. Partnerships like these could greatly benefit both the educators and students with hearing loss to function more effectively.

Garay (2003), also suggests that transition planning start in middle school because most of it presently takes place in the senior years leaving little time for students to prepare. She recommends teachers involve parents and students at this time to discuss what kinds of future supports need to be in place when the student completes high school like assistance with independent living or access to interpreters and so forth. Garay concluded in her research that involving students with hearing losses in decisions concerning their transition planning motivates them. She indicates that allowing these students opportunities to learn self-advocacy skills empowers them in determining their own futures. Other studies support Garay’s view revealing, “Students did not report receiving any self-determination training relating to decision making” (Ingraham & Anderson, 2001). Student/family input needs to be included in the transition planning in order to find what best suits the student’s/family’s needs. Everyone having a voice in the planning, especially the student that planning is centered around, can help increase the commitment behind the decisions made. “Research has shown that students who have positive self-perceptions and control over their learning abilities are more willing and likely to work successfully with the adults in their environment” (Van Reusen, Bos, Schumaker, and Deshler, 1994). The reauthorization of the IDEA in 1997 reinforces this research by clearly stating, “That secondary special educators are responsible for inviting students and their families to IEP meetings” (Sitlington, Clark, & Kolstoe, 2000). Inviting students with hearing loss may require extra time for interpreters to relay information to the student, or it may take more time for each team member to face the student for lip reading purposes and additional time to ensure the student understands. Referring to visual aids throughout the meeting also requires extra time. Regardless, investing the time to involve students and their family can reap long term rewards in helping the students develop self-advocacy skills early in life that can help reduce the barriers they’ll face later in life.

Educational Adaptations/Strategies

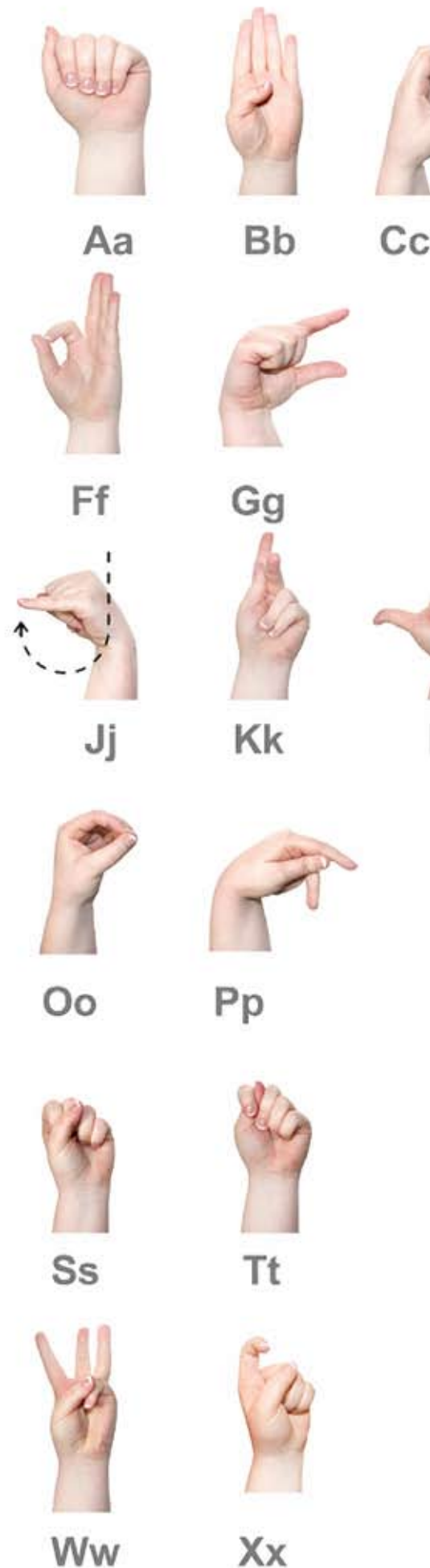
Teachers need to make special considerations when teaching hearing-impaired children. Much of the consideration involves common

sense that sharpens through close collaboration with the student, the student's family, and the SLP, people that have more experience and training. The student and student's family can certainly offer the teacher support on a daily basis through constructive criticism of what is or isn't working for the child in the classroom. The following are suggestions by Hall, Oyer, & Haas (2001) for teaching hearing-impaired children:

- Ensure the child has an optimal hearing and listening environment in the classroom;
- There should be minimal distance between the teacher and the child to facilitate lipreading;
- Face the child during all oral communication;
- Ensure there is good lighting to reinforce clear sight of visual aids;
- Don't exaggerate pronunciation, as this will deter understanding;
- Use as much visual information as possible to reinforce auditory information provided;
- Keep environmental noise to a minimum to keep from interfering with listening devices; and
- Teachers should frequently check to see that the listening devices are working properly.

Teachers need to be sensitive to the social, academic, and emotional challenges a child with hearing loss has in any given day. Extra energy is required in interpreting information through lipreading that would otherwise be simply heard by children without a hearing loss. There are extra steps in processing audio information that a hard of hearing student needs to take in order to fully comprehend. The student with a hearing device will use more energy in having to concentrate on sound from a direct source like a teacher while blocking out environmental noise like the humming of lights or air conditioners. A student with hearing loss will therefore expend much more energy coping than a student without hearing loss. Teachers need to be sensitive to the reality that there is usually more than one visual thing happening at one time like a teacher talking while expecting students to take notes of the lecture. Expecting a hearing impaired student to read lips and take notes at the same time is not realistic. The main notes could be provided to that student beforehand so that the student can focus on lip reading the lecture. Volunteer notetakers could be assigned to support hearing impaired students in the higher grades or university where notetaking is done on a daily basis. Many hard of hearing students will also be required to take more work home to prepare themselves for class material to be covered the next day.

Hall, Oyer, and Haas (2001) suggest teachers support hard of hearing students by frequently checking to ensure the child understands information provided in class. They provided an alternative suggestion in assigning a hearing peer to assist the hearing impaired child to be an active participant in school activities for those times the teacher is preoccupied with other students. Another suggestion was for the teacher to "learn to read" the child's facial expressions in order to have feedback about his/her understanding of material presented. This particular suggestion takes some time as the teach-





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er gets to know the student better (p.147). In cases when the student doesn't understand what was said, rephrasing with additional words relevant to what you want to say can provide cues to aid speech comprehension. "When rephrasing, use words central to the main idea of the communication. For example, if you are saying, "You can get your coat from your locker now," and the student doesn't understand, you could say, "Everyone is getting ready for the bus; you can get your coat from your locker now" (Kaveravek, 2002, p.16). Whenever the opportunity arises, teachers should also teach the other students about hearing loss and what they can do to support hearing-impaired children in class.

Other research by John Luckner (2001), a professor at the University of Colorado, provides the following instructional aids teachers could use with students that are deaf or hard of hearing:

- Sign, fingerspelling, and speech reading;
- Equipment such as overhead projectors, bulletin boards, computers, and televisions that show captions on the screen; and
- Materials including pictures, illustrations, artifacts, slides, computer graphics, and films with captions.

Luckner suggests using visual aids like a classroom rules chart, job and choice menus, transition time cards and charts, task organizers, daily schedules, and the Internet to "enhance the communication and learning process." He suggests using graphic organizers like semantics maps or story maps to communicate important concepts without "extraneous information." He also suggests, "Teaching students how to access the information provided on visual supports found in our daily lives, such as packages, menus, logos, maps, and assembly instructions" (Luckner, Bowen, and Carter, 2001).

Luckner's suggestions reinforce a sensitive approach teachers can take in alleviating unnecessary information that takes so much energy for the deaf or hard of hearing students to process.

As previously mentioned in this paper, schools haven't extensively addressed environmental noise in the classroom despite research revealing classroom acoustics as a problem. "Too many classrooms have been found to be excessively noisy and not appropriate for the learning of a hearing-impaired child using amplification" (Ross, Brackett, & Maxon, 1991; Crandell, & Smaldino, 1996). Background noise proves to have the greatest effects on the hearing ability of children with mild hearing losses (Anderson, 1999). Therefore, teachers need to be acutely aware of their teaching environment and adapt accordingly if possible. Adaptations can start with basic things like ensuring heating and air conditioning systems, fans, and lights are all working properly to alleviate unnecessary vibrations or hums in the class (Kaderavek, 2002, p.16). Anything the teacher can use to absorb noise in the classroom becomes an asset for a hearing-impaired child.

Teachers need to maintain close communication with the SLP in order to receive guidance and consultation that can help in increasing the child's success in the classroom.

"The teacher should be fully informed about a hearing-impaired child's performance standards and potential" in order to develop a program with realistic goals for the child to achieve (Hall, Oycer, & Haas, 2001, p. 147).

Summary

Hearing impaired students face many challenges in our audio saturated world. Educators need to be aware and sensitive to those challenges when developing school programs. Ignorance of these challenges only leads to frustration for the hearing impaired student that could lead to classroom management problems for the teacher. Environmental noise is one of those challenges that schools need to address more seriously because it interferes so much with support for hearing-impaired students. Teacher awareness comes from maintaining close communication with the student, the parents, the SLP, and community agencies. This communication is imperative in developing proper support services for the child.

Early intervention of hearing loss is also very important in helping to alleviate, whenever possible, delays in the child's social, emotional, and educational development. Early detection relies heavily on proper and efficient testing that has advanced as far as testing infants today. The more efficient the screening tests, the less likely children with slight hearing losses will be overlooked and mislabeled causing possible long term damage in their lives. An incorrect diagnosis means inappropriate therapeutic goals that create more problems for all involved.

Overall, there has been substantial progress in assistive technology and support services that offer hearing impaired people and organizations a much wider range of options to choose from when designing therapeutic goals to facilitate their lives.

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