

ネットワークを活用した健康自己管理支援システム構築に関する研究
ーウイスクンシン州との比較をとおしてー

平成9年度～平成11年度科学研究費補助金（基盤研究(C)(2)）研究成果報告書

平成12年3月

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第 1 部

基礎的検討

I はじめに

NHK放送文化研究所「小学生の生活とテレビ調査」によれば、パソコンを使ったり、遊んだりしたことがあるが小学生は64%で、最も多い6年生では73%に上っている。パソコンを利用した場所では(複数回答)、「学校」が55%と最も多く、「自分の家」が46%であった。利用目的では(複数回答)、「ゲームをするため」が68%、次いで「絵をかくため」42%、「勉強をする」26%などである。利用内容はともかくとして、子ども世界でも確実にパソコンが利用が広がってきている。そしてパソコン利用の内容にインターネットが入ってくる。

平成9年、情報化の進展に対応した初等中等教育における情報教育の推進等に関する調査研究協力者会議の「体系的な情報教育の実施に向けて」(「第1次報告」)や平成10年の「教育分野におけるインターネットの活用促進に関する懇談会(報告書)」にみるように、学校でのインターネット利用を促進する報告や答申が矢継ぎ早に出されている。

文部省は11年度から、学校への教育用コンピュータ導入が進行しつつあるのを背景に、全公立学校を対象にしたインターネット接続整備計画を発足させた。中・高校と特殊教育諸学校は13年度までに、小学校は15年度までに接続を完了する目標であるという。これに対応する形で、14年度から実施に入る新学習指導要領には、情報教育の充実策が盛り込まれている。

また、機器の維持管理や指導に取り組む教員の負担を考慮し、昨年度から情報通信ネットワーク拠点整備事業を始めている。これは広域的に学校をつなぐネットワークの拠点として、教育センターを整備し、学校が教育センターを通じ、インターネットに接続できるようにすると同時に、教育センターからソフトウェアをはじめ、さまざまな教育情報を入手できるようにしようという構想である。11年度予算では12億8百万円を計上し、30カ所を整備することにしており、近い将来には全部道府県に及ぼしていくということである。

以上のように、学校をインターネットでつなぐという事業は急展開している状況である。健康教育の場面を考えても、課題解決型学習の中で、サーチエンジンを用いて、国内外にわたる最新の健康関連情報を即時に引き出せたり、健康問題について多面的に検討するために、多方面から多様な情報を収集するうえできわめて有効な道具になりうる。

しかし、インターネットに接続し、健康関連のホームページを開くと、健康の保持増進

に役立つ有用なものから、非科学的なものや、もっぱら営利を目的にしたものなど玉石混濁といった状況である。ともすれば、この健康情報の洪水のなかで、なにがほんとうなのかを見失ってしまいかねないという状況でもある。

そういう世界に子どもたちを引き込むことの善し悪しや、生活経験の質と量が問われている現代の子どもたちを、さらに画面に縛り付け、バーチャルな世界に浸らせる事になるかもしれないという不安もある。健康という身体を基盤にする具体的な事柄も、健康情報という電子化された情報メディアとして個々の生活に入り込んでくることで、身体性が失われ、実体のない空疎なものになっていくのではないかという不安である。また教育実践現場から、教育実践にとってインターネット利用の必要性や必然性が語られず、先に機器の導入ありきという形で進行していることにたいする不安もあがっている。

本論考は、現代の健康問題の性質と、それへの対応として健康教育の中で取りあげられるセルフケアとしての保健行動について整理し、児童生徒の健康の自己管理能力の発達を支援する、データベース構築の構想について述べる。

II 生活習慣病とセルフケア

1. セルフケアの登場

ここで取り上げる健康の自己管理（以降、セルフケアと記述）は、19世紀以降の医学の進歩と同時に進行した「素人」医療から専門家による医療体制が確立し、先進工業国では感染症対策が進み、減少に向かう一方、生活習慣病と呼ばれる慢性疾患への対応が中心的課題として登場してきた20世紀後半以降の考え方である。

1970年代後半から欧米をはじめとする先進工業国では慢性的な疾患や障害による健康問題が増加してきた。これらの発症要因は、従来のような感染症に由来する単純な病因論では説明しがたい複雑なものとなっている。これらの疾病群について、Breslowらによる1965年から9年間にわたるカリフォルニア州、アラメダ郡における先進的な追跡調査研究が行われた。

この研究を通して、喫煙、飲酒量、睡眠時間、身体的活動量などの日常的な生活習慣の善し悪しが健康度や死亡率と密接な関係にあることを明らかにした。これらは、Breslowの7つの健康秘訣として知られている。このように慢性的疾患の疫学的研究により発症要因として、労働環境や日常の生活環境にかかわる多様な要因が考えられ、その対応策の一つ

として日常的な生活習慣＝ライフスタイルの改善が注目されるようになる。

あわせてこれらの慢性疾患は完治が難しく、例えば高血圧症のように、発症してしまつたら長期間食事や投薬などによる長期間の管理が必要になる。このことが医療費の増大を引き起こし、いっそう自己管理＝セルフケアが要請される誘因となった。

1980年代から急速に進展した情報通信革命により、医学にかかわる様々な情報がマスメディアを適して流布され、健康や医療に対する一般の人々の知識や一部のスキルが増大した。もう一方で、専門分化し、商業化するなかでの医療は、検査づけ、薬づけ、医療過誤を頻発させ、現在の医療への疑問や批判がおこり、医師に頼らず自分の手でとして一般の人々に強く意識させていった。

1960年代の市民権運動や消費者運動などに関連し、自覚的な市民の登場が、自分のことは自分で守るという自己管理要求をの増大や、患者の権利宣言にみられるような自己決定権を重視する動きが台頭して、セルフケアやセルフヘルプといった考えを推し進める背景となっている。健康増進や疾病予防、疾病管理を自ら積極的に行おうとする意識を強めることとなった。特に1980年代後半の医療におけるセルフケアの位置づけは、個々人と社会組織の連帯による共同のとりくみへと大きく転換てきている。

以上のようにセルフケアという考えは、疫学的研究の進展、一般の人々による医療的行為の拡大と医療の限界の認識、医学情報の、医療費の高騰、社会運動と市民意識の高揚などとの関係を持ちながら形成されてきた概念である。このような由来を持つセルフケアということばは、様々な意味内容を含んでおり、用いる人の分野、関心、目標等によって異なった内容を持つ。また、この用語が適用されている範囲も、健康維持・増進といった第一次予防の領域に入るものから、一早期発見・早期治療などの第二次予防、さらには疾病の自己管理などの第3次予防の領域にまで広がりをもっている。

2. セルフケアをめぐる世界保健機関（WHO）の動き

第二次大戦以降の健康管理に関する世界的動向のなかで、セルフケアについては1978年のアルマアタ宣言に盛り込まれたプライマリ・ヘルスケアの提唱以降のことである。

それまでの考え方としては、1946年に作成され、1948年発効した世界保健機関憲章の前文に示された考えであった。

憲章前文では九項目に「政府はその国民の健康に対して責任を負うものであるが、その

責任は、適切十分なる保健方策および社会方策を供与することによってのみ果たすことができる」と述べていたように、公的な責任で健康状態を改善することを強調し、とくに個人の観点（セルフケア）から健康について言及はしてはいなかった。

1978年、旧ソビエト連邦のアルマ・アタで開催されたWHO国際会議でのアルマ・アタ宣言は「健康教育の宣言」といわれるほど、健康教育を重視したものであった。その活動方向についても、疾病治療を中心とした保健医療から、健康増進・予防を中心としたものへの方向転換がみられる。アルマ・アタ宣言ではPrimary Health Care (PHCと略す)が提唱され、「自助と自決の精神」という形で健康の維持管理について自己管理がうちだされた。なお、これ以降のWHO政策展開については、医療人類学者 Ann McElroy らの手厳しい批判がなされている。

1988年のオタワ国際会議では、ヘルスプロモーション（健康増進）の考えが導入された。このなかでは、自らの健康をコントロールする能力が強調され、セルフケアがヘルスプロモーションにおけるひとつの重要な構成要素として位置づけられている。

このようにヘルスプロモーション（健康増進）という文脈で用いられるセルフケアでは、疫学的要因に基づくリスクファクターと関係させて、個人のライフスタイルに焦点があてられがちである。しかし、個人のライフスタイルないし保健行動は社会的、文化的、経済的な要因によって強く影響されるものである。経済的に裕福でない階層に属している人々は、食品を選択する際、往々にして健康の保持増進という観点よりも価格の高低に強く意識が働き、結果的に健康に良くない食品を選択し、長期的には健康を害することになるなどはその例である。従ってそれらを見做した生活習慣変容（ライフスタイルチェンジ）のアプローチに対しては、健康の保持増進に関わる多様な要因のうち、個人責任を一面的に強調するものとして批判的となっている。

これと関連して、サルモンも、「健康上の問題は主として個人の行動に由来するというこのライフスタイル・イデオロギーは、一般の人びとの心をしっかりとつかんでいる」との指摘を行なっている。

3. 日本の動向

昭和60年版の「厚生白書」のなかで、「国民の自助努力と社会保障」と題して次のような記述がされている。

「社会保障を提供する過程を通じて、ニードを有する者のニード充足への意欲とその者

が保有する能力をフルに引き出すことが重要である。特に、現在、病気の主流を成す成人病等の慢性疾患については、日常生活を通じて自らの心身を管理していくことが取組の前提となる。。そのために、まず、国民一人一人が自らの心身の状況に応じ健康づくりにこ励むとともに、重い病気の場合は別として病気を抱えていてもこれとうまくつき合いながら、意欲をもって充実した社会生活を営むことができるよう、自分自身の心身を適切に管理していく生活態度が多く国民に根づいていかなければならない」。

この記述から読みとれるように、日本におけるヘルスプロモーションへの取り組みも、個人責任を強調する方向に向けられている。この姿勢はその後、ダイオキシンなどを含めた内分泌攪乱物質いわゆる環境ホルモン対策で、社会的な対応が求められることがらについても、個人的な対応で切り抜けようという姿勢がみられ、対応の遅れを招き、強い非難を浴びることとなった。

このようなもっぱら個人の内面的・心理的・精神的な方向へと向けられて、対外的・社会的側面に目が向くことが少ないように見受けられる。

自らの健康は自らが責任をもって取り組むというセルフケアの考えは、積極的な意味を持つものであろう。ただし、先述したように、個々人の生活習慣も健康状態を左右する多様な要因の中の一要因であり、すべて個人の側の要因に帰せるものではない。またそれ自体社会文化的、経済的要因等影響を受けて結果しているものである。

今日のヘルスプロモーションやセルフケアの主張の多くは、健康問題を抱えた人々に、可能な限りさまざまな機会を提供したり、介入を試みはするが、自発的な取り組みや生き方は強制すべきことではなく、最終的には個々人の価値観や選択にまつという考えのものが多い。

児童生徒の健康を守り、健康の自己管理能力を伸ばしていくにあたって、自主的で自律的な思考や判断をもとにした自己の確立を意識させるとともに、個々人の健康と社会的、文化的、経済的諸要因の規定関係もふまえたセルフケアの考えを育てることが求められている。

III 批判的思考

米国の健康教育領域では、近年に健康情報の概念規定が試みられている。それによると健康情報(Health Information)とは、「健康に関する問題、政策、プログラム、サービス及び個人保健と公衆衛生の他の側面についての、系統的かつ科学的方法により得られたデータ

に基づいたコミュニケーション内容であり、さまざまな住民を啓発したり、健康教育活動を計画するにあたって役立ち得るもの」とされる。

児童生徒たちが日々接する健康情報は先に述べたように信頼ができ、健康の保持増進に有効なものから逆に有害なものまである。また、健康の個人責任が強調される環境下では、セルフケアの保健行動も、極めて個人生活の枠に限定されたものになる可能性がある。

そこで求められるのは、自らの思考や判断そして行動を、自ら吟味する批判的（反省的）思考であろう。

小倉（1972）によれば、米国の健康教育の目標の中に批判的思考が出てくるようになるのは 1950 年代から始まった教育課程現代化の動きのなかであったとされる。全米教育協会と米国医学会の保健問題連合委員会の見解（1965）のなかで、保健教育は保健の基本的概念の習得をとおして批判的な思考力、科学的に判断する能力の発達を重視する考え方がだされた。それまでの目標が習慣のような定型的な行動パターンを習得させることや知識の習得に重点がおかれたものであり、大きな転換であった。この背景には当時の深刻な環境問題の存在があったとされる。これまでの目標観にもとづく状況適応的で固定的な習慣行動を学習する健康教育では、環境問題から生み出される新たな健康問題には対応できないことが明らかになった。将来、未知の健康問題にであうかも知れない学習者につけるべき能力として、批判的思考力と科学的判断力が提案されたのであった。

批判的(critical)という言葉は、ギリシャ語の *kritikos* に由来する。質問すること、納得のいく説明をすること、分析することを意味している。批判とは自己および他者の思考を吟味することを指している。

批判的思考について、Chaffee は、「自己と他者の思考を注意深く吟味するための、積極的で、目的指向的、かつ組織化された認知の過程であり、それはわれわれの理解を向上させる」とし、Mmer と Babcock は「批判的思考とは、目的指向的な思考法であり、議論の焦点・言葉・準拠・態度・前提・証拠・論証・結論・適用、そして正しいか正しくないか、その行為を行うか否かを意思決定するうえでの文脈、それらすべてを考慮することである」としている。

このように批判的に思考するということは、きわめて実際的で実践的な過程であることがわかる。セルフケアとの関係では、生活習慣病のように多様な要因が複雑に絡み合って生起し、単に個人レベルの生活習慣の変容ないし改善では解決が困難な健康問題に対処していくには、Mmer と Babcock の定義のなかの「正しいか正しくないか、その行為を行う

か否かを意思決定するうえでの文脈、それらすべてを考慮すること」ということが、問題状況を批判的に思考し吟味する力としてがますます求められることであろう。

下に、今日のアメリカの健康教育の基準と、ウイスコンシン州オークレア市で展開されている健康教育の目標を示した。これからも、批判的思考力に基づいた健康教育が目指されていることがわかる。

連邦政府の健康教育基準

- A-生徒は健康増進と疾病予防に関連した概念を把握できる
- B-生徒は適切な健康情報と健康増進のための製品やサービスにアクセスする能力を発揮できる
- C-生徒は健康を増進する行動と健康上のリスクを減少させる実践能力を発揮することができる
- D-生徒は健康に影響を及ぼす文化、メディア、工業技術、その他の要因を分析することができる
- E-生徒は健康を増進するため人間相互のコミュニケーション能力を発揮することができる
- F-生徒は健康を増進するため目標設定、意志決定の技能を用いる能力を発揮することができる
- G-生徒は個人、家庭、地域の健康の推進者としての能力を発揮できる

オークレア市の健康教育の目標

批判的思考の過程をとおして以下の生活技能を学ぶ

1. Refusal Skills (拒否の技術)
2. Assertive Skills (確固たる態度をとる技術)
3. "I Message" (「わたしは主張する」)
4. Goal Setting (目標設定)
5. Cooperation (協力)
6. Conflict Resolution Peer Mediation (もめ事処理のための仲間による仲裁)
7. Decision Making (意志決定)
8. Problem Solving (問題解決)
9. Active Listening (積極的傾聴)

10. Access Resources (資源へのアクセス)
11. Communication (意志疎通)
12. Self Evaluation (自己評価)
13. Personal Intervention/Confrontation Skills (個人的介入と対面の技術)
14. Prediction (予測)
15. Other (その他)

IV 児童生徒の反省的(批判的)思考活動を支援する データベースのデザイン

データベースは、ある分野についての知識なり情報が一定の様式で蓄積されており、使用目的に応じて引き出されるものである。

ここで構想するデータベースは、児童生徒たち自らが健康上の疑問や問題を考えながら、健康の自己管理に有用なデータベースを構築し、そのデータベース上で収集された健康情報やお互いの思考や判断を、相互に吟味し、利用しセルフケアに役だてていくことを支援する機能を持たせたものである。

このような目的にかなうものとして、スカーダマリアとブライターによるCSILE (Computer-Suported Intentional Learning Enviornment) が後述(第2部)の、オークイレア学校区教育委員会のMedia Coordinator、Linda Stelterより紹介された。

このデータベースは当初はデータベースの中に何の情報も蓄えられていない。まず児童生徒たちが情報を書きこんでいく段階がある。児童生徒は「自分が疑問に思っていたこと」、それについての「自分なりの考え」、「収集した関連情報」、「自分がこれからやらなければならないこと」など、自分の考えを一種のハイパーカードを用いてデータベースとして蓄えていく。そのカードには、異なる疑問を分類するために、「問題の種類」といったラベルが付けられ、これによって一応の分類がされる。

蓄えられていくデータベースは、その学校の範囲内で公開される。データベースへアクセスしたものは他のカードを検索し、それを読んだり、なにがしかの意見があれば、そのコメントをリンクさせることができる。このようにハイパーカード機能を活用し、提出されている事柄に、自分の「疑問」、「意見」、「考え」、「情報」が書き込み、リンクを張っていく。問題解決のアプローチが、一学校の範囲内という限定付きではあるが、共同作業として展開される。もちろん教師も、特に学校における健康管理の専門家として、養護教

論も積極的に参加し、意見や情報交換、そして議論に積極的に参加し、リードする。

このような機能を持つデータベースという共同作業場で、自分や他人の問題や問題に対する考え、意見を対象化したかたちで操作するなかで、児童生徒の批判的（反省的）思考を促進することをねらっている。

このようなデータベースを構築していくにあたって、身近な健康情報を収集し、データベースとして蓄積していくためのシステムを試験的に作り、データの蓄積を進めている。

システム概要を資料として 12 頁以降に収録した。

（注 1）

「教育分野におけるインターネットの活用促進に関する懇談会」は、小中高等学校等教育分野において、学習の中でインターネットを活用することにより、次代を担う児童生徒が、早い段階からインターネットに慣れ親しんでいけるようにするため、郵政大臣と文部大臣の主催により、教育分野におけるインターネットの活用にあたっての考え方や利用環境の整備の在り方などについて検討、提言するたの懇談会。（座長：石井威望 慶應義塾大学大学院 政策・メディア研究科教授）。その基本目標は、「子どもたちがもっと自由にインターネットを活用できる環境づくり」である。

（注 2）

生活習慣病は「食習慣、運動習慣、休養、喫煙、飲酒等の生活習慣が、その発症・進行に関与する疾患群」である。生活習慣病という用語が使用されるまえは成人病という用語が使われてきた。これは医学用語ではなく、「主として、脳卒中、がん、心臓病などの 40 歳前後から死亡率が高くなり、しかも全死因の中でも上位を占め、40～60 歳くらいの働き盛りに多い疾病」として昭和 30 年代に行政的に提唱されたものである。その後、成人病の発症には生活習慣が深く関与していることが明らかになり、この生活習慣に着目した疾病概念を導入することで、疾病の発症・進行が予防できるという認識を醸成し、第一次予防につなげていくことが意図されている。

（注 3）

「喫煙をしない」、「飲酒を適度にするかまたはまったくしない」、「定期的にかなり激しい運動をする」、「7～8 時間の睡眠をとる」、「毎日朝食を摂る」、「不必要な間食をしない

い」

(注4)

アルマ・アタ宣言のⅦ節には次のようにのべられている

(5)地域住民と個人が地域、国およびその他の利用可能な資源を十分に活用するために最大限の自助努力を行い、プライマリーヘルスケアの企画、組織化、実施、管理に参加することを必要とし、これを推進する。そして最終的には、適切な教育によって地域住民がこれに参加することのできる能力を開発する。

(6)総合的・機能的で相互支援的な後方支援システムによって支えられるべきものであって、すべての人々のための総合的ヘルスケアを積極的に改善し、最も必要としているところに優先権を与えるものでなければならない。

(注5)

「しかし、別の見方をすると、プライマリーヘルスケアとは、村落の貧しい人々は二流の保健サービスを受けさせられ、「住民参加」という名目でサービスに対する支払いを要することである」とも言えるとしている。また、「保健医療の官僚組織のもつ固定された専門的な興味のおかげで、政府からの情報は流れやすいが、末端、すなわちコミュニティからの情報は得にくくなっている」と述べている。

(注6)

園田は、ヘルスプロモーションやライフスタイルやセルフケアへの着目に対して、それらはあまりにも今日の健康や病気の問題の所在を、個人の自覚や、日常生活の送り方や、生活様式といった場面や側面に限定し、集中させすぎており、そのため、環境の条件や制度や社会の面への着目や言及が弱くなっているとの批判として、マックレロイの、「ヘルスプロモーションの戦略は、そのほとんどが個々人の変化に焦点をあててきた」また、ラトクリフらの「ヘルスプロモーションということは、病気の因果関係の『ライフスタイル』理論に基礎をおいており、そしてそれは個々人の健康状態は、ダイエットやストレスや薬の習慣などに個人がどう対処しているのかということと究極的にはリンクしているとみなしている。……これに対して、ヘルスプロテクションというのは、病気の原因を『社会構造塾理論に基礎をおいており、そしてこの理論は、人びとの健康状態は、社会の資源の不

平等な分配、産業公害、職業上のストレス、そして非健康増進的なマーケティング戦略などと究極的にはリンクしているとみなしている」との指摘を紹介している。

(参考文献)

- 1) 園田「健康観の転換」 西田真寿美「セルフケアをめぐる論点とその評価」
- 2) 前掲書
- 3) 厚生省、厚生白書 昭和 60 年度版 p.5
- 4) Naomi Modete, Dictionary of Public Health Primotion and Education, Sage,1995
- 5) M.A.Miller & D.E.Babcock, Clitical Thinking Applied to Nursing, Mosby, 1996
- 6) 佐伯 胖他編著「情報とメディア」、岩波書店、1998、p.233

資 料

保健室データベースカード概要

1. データベースカードの構成

1) テーブル

テーブル名	説明
来室けが	けがデータ用テーブル
来室病気	病気データ用テーブル
部活動	部活動名登録用テーブル
けが抽出	データ書き出し用テーブル
病気抽出	データ書き出し用テーブル

2) クエリー

クエリ名	説明
けが印刷クエリー	けが一覧印刷用日付抽出クエリー
病気印刷クエリー	病気一覧印刷用日付抽出クエリー
けが抽出クエリー	けがデータ書き出し用 「けが抽出」 テーブル作成クエリー
病気抽出クエリー	病気データ書き出し用 「病気抽出」 テーブル作成クエリー

3) フォーム

フォーム名	説明
メニュー	メインメニュー画面
教諭用メニュー	教諭用メニュー画面
パスワード	教諭用メニュー時のパスワード入力画面
来室けが	けがデータの登録・変更画面
来室病気	病気データの登録・変更画面
生活状況	「来室病気」フォームのサブフォーム
けが来室一覧	教諭用 「けが画面一覧」画面
病気来室一覧	教諭用 「病気画面一覧」画面
部活動登録	教諭用 部活動名登録用画面
日付指定 1	けが印刷時の日付範囲指定画面
日付指定 2	病気印刷時の日付範囲指定画面

4) レポート

レポート名	説明
けが来室一覧	けが一覧印刷様式
病気来室一覧	病気一覧印刷様式

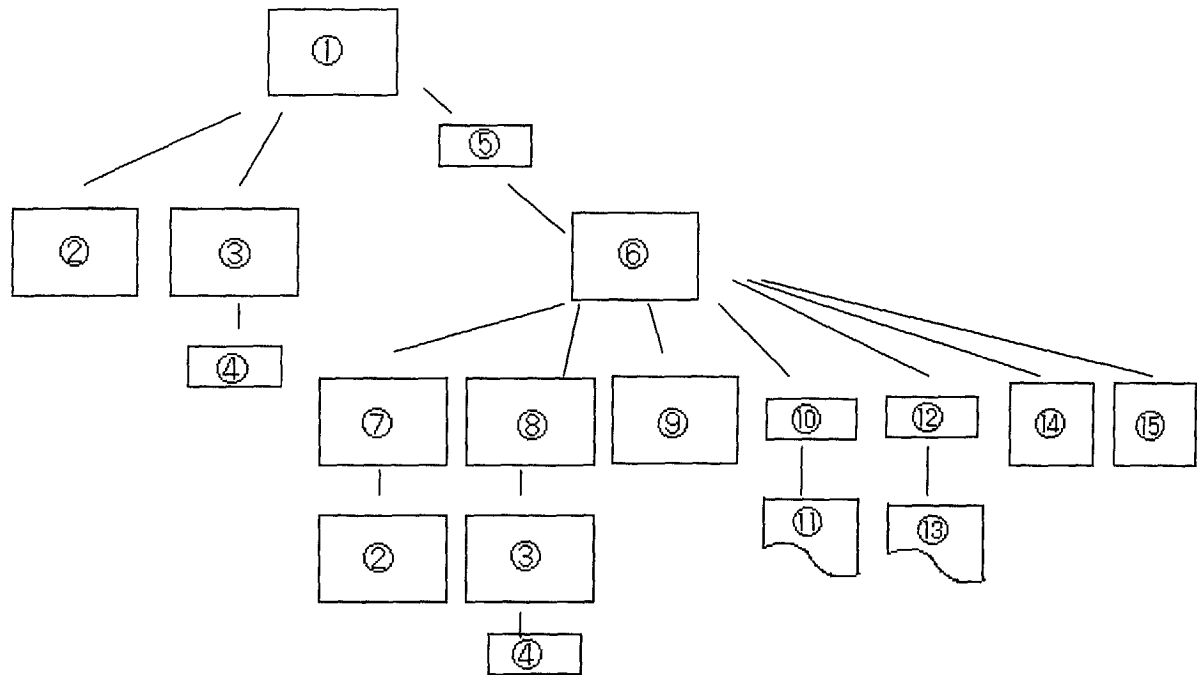
5) マクロ

マクロファイル名	マクロ名	説明
Autoexec		起動時にフォーム最大化
共通	けが開始	けが登録用画面表示
	病気開始	病気登録用画面表示
	けがキャンセル	けが登録キャンセル処理
	病気キャンセル	病気登録キャンセル処理
	教諭メニュー開始	パスワード入力画面表示
	パスワードオン	パスワードチェック処理
	教諭エラー	パスワードエラー表示
	終了	アクティブ画面終了処理
	アプリ終了	アプリケーション終了処理
教諭	けが一覧開始	けが画面一覧表示
	けが更新呼び出し	けが更新用画面表示
	病気一覧開始	病気画面一覧表示
	病気更新呼び出し	病気更新よう画面表示
	削除	けが・病気共通 データ削除処理
	けがキャンセル	けが更新画面のキャンセル処理
	病気キャンセル	病気更新画面のキャンセル処理
	けが抽出	けがデータ書き出し処理
	病気抽出	病気データ書き出し処理
	けが印刷	けが印刷時の日付指定フォーム表示
	けが一覧印刷	けが一覧印刷処理
	病気印刷	病気印刷時の日付指定フォーム表示
	病気一覧印刷	病気一覧印刷処理
	部活動登録	部活動名登録画面表示
	病気	生活状況入力
生活状況キャンセル		生活状況フォームクリア処理
曜日セット	けが	けが登録画面 曜日算出処理
	病気	病気登録画面 曜日算出処理

6) モジュール

モジュールファイル名	モジュール名	説明
共通	キャンセル	けが・病気の登録取り消し処理
	Rec キャンセル	けが・病気の変更取り消し処理
	削除	けが・病気のデータ削除処理

2. フォームの関連図



- ① メインメニュー ② 来室けが ③ 来室病気 ④ 生活状況 ⑤ パスワード
 ⑥ 教諭用メニュー ⑦ けが来室一覧 ⑧ 病气来室一覧 ⑨ 部活動登録
 ⑩ 日付指定1 ⑪ けが来室一覧（レポート） ⑫ 日付指定2 ⑬ 病气来室一覧（レポート）
 ⑭ けが.xls ⑮ 病气.xls

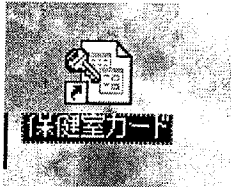
*けが・病気の生徒用登録画面と、教諭用メニューからの変更画面は同じフォームを使用しています。

3. データベースカード内容目次

1. 保健室DBの起動
2. メインメニュー
3. 生徒用「けがの記録」登録画面
4. 生徒用「病気の記録」登録画面
5. 教諭用
6. 教諭用メニュー
 6. 1 けが画面一覧
 6. 2 「けがの記録」変更画面
 6. 3 病気画面一覧
 6. 4 「病気の記録」変更画面
 6. 5 部活動登録
 6. 6 印刷処理
 6. 7 データ書き出し処理

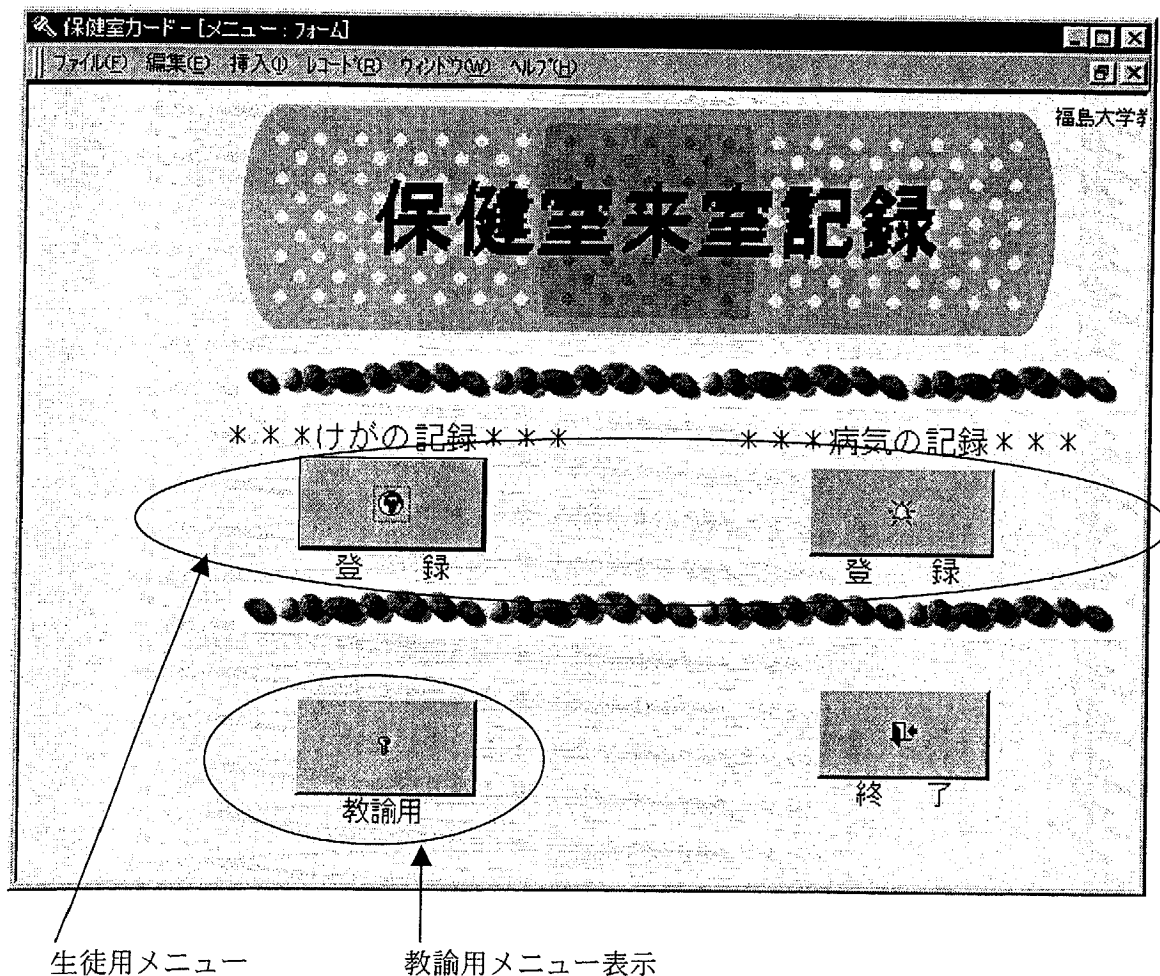
1. 保健室DBの起動

まず、デスクトップ上のショートカットアイコン「保健室カード」をダブルクリックします。



2. メインメニュー

メニュー画面が表示されます。



3. 生徒用「けがの記録」登録画面

生徒が記入

教諭が記入

入力について

①来室時間

月/日：西暦で入力します。 例) 98/10/1

曜日：月/日を入力すると、自動で表示されます。

時：分：時刻を入力します。 例) 16:20

②学年氏名

年・組・出席番号：それぞれ入力します。

氏名：漢字で入力します。

所属部活：右はしの▼をクリックすると一覧が表示されるので、該当するものをクリックします。

③発生時刻

該当するものの「○」をクリックします。選択されたものには中に●が表示されます。

詳細が必要な場合は、それらを入力、または▼をクリックして選択します。

④発生場所

発生時刻と同様に該当するものをクリックします。

⑤原因・発生状況

ワープロと同じ要領で入力してください。

ただし、改行はできません。1行に納まらなければ自動で改行します。

入力できるのは漢字で90文字までです。

⑥どこを

該当するものをクリックしてください。

複数選択が可能です。

⑦傷病名

該当するものをクリックしてください。

複数選択が可能です。

⑧観察

該当するものをクリックしてください。

複数選択が可能です。

⑨判断・処置

該当するものをクリックしてください。

複数選択が可能です。

入力が終わったら

「登録して戻る」のボタンをクリックしてください。

入力を止める場合は、「取り消して戻る」ボタンをクリックしてください。

4. 生徒用「病気の記録」登録画面

保健室カード - [入室けが]

病気の記録

来室時間 月/日 98/10/03 曜日 日 時:分 9:50

学年氏名 2年 3組 36番 男子 女子 氏名 郡山花子 所属部活

授業中 休み時間 放課後 部活動 その他

後温・後脈 体温 38度 3分 脈拍数 90/分

具合が悪いところ

頭痛 腰痛 のどの痛み 発熱 気分不快 めまい
吐き気・嘔吐 下痢 月経障害 かせ その他

どこが

頭部 前 胸部 左 中央 右 詳しく
左 中央 右 腹部 左 中央 右
後ろ 下腹部 左 中央 右

ここをクリックして「生活状況」の入力をしてください。

具合が悪くなった原因 前にもこんな症状になったことが あった ない

どうしたいのですか

1 〇 薬がほしい 2 〇 授業にもどりたい 3 〇 ベッドで休みたい
4 〇 保健室にいたい 5 〇 早退したい 6 〇 その他
7 〇 相談したい

保健室での処置

1 〇 教室で経過観察 2 〇 与薬 3 〇 保健室で休養 経過観察 4 〇 早退 (保護者の迎え 有 無)
帰室または早退時間 10時 20分 5 〇 その他

クリックすると表示されます。

生活状況: フォーム

生活状況の入力

STOP 登録して戻る

取り消して戻る

就寝 23時 0分 自分で起きた 睡眠 7時間 30分
起床 6時 30分 起こされた 気分 快 不快

朝の健康状態 1 〇 すっきりと気分爽快 2 〇 普通 3 〇 具合が悪い(薬の服用 有 無)

睡眠状態 1 〇 よく寝た 2 〇 普通 3 〇 睡眠不足

今朝の便通 1 有(普通便 やわらかい便 水様便 固形便) 2 〇 無 3 〇 便秘

今朝の朝食 1 〇 食べた 2 〇 少し 3 〇 食べない

朝食はいつも 1 〇 食べる 2 〇 時々 3 〇 食べない

入力について

① 来室時間

月／日：西暦で入力します。 例) 98/10/1

曜日：月／日を入力すると、自動で表示されます。

時：分：時刻を入力します。 例) 16:20

② 学年氏名

年・組・出席番号：それぞれ入力します。

氏名：漢字で入力します。

所属部活：右はしの をクリックすると一覧が表示されるので、該当するものをクリックします。

③ 発生時刻

該当するものの「」をクリックします。選択されたものには中に△が表示されます。

③ 検温・検脈

入力します。

④ 具合が悪いところ

該当するものをクリックしてください。

複数選択が可能です。

⑤ どころが

該当するものをクリックしてください。

複数選択が可能です。

⑥ いつから

該当するものをクリックしてください。

⑦ どのように

該当するものをクリックしてください。

⑧ 生活状況（「ここをクリックして…」をクリックして入力します。）

就寝・起床・睡眠時間：時刻を入力してください。

例) 就寝 時 分

その他の項目：該当するものをクリックしてください。

入力が終わったら、「登録して戻る」のボタンを押してください。

入力を取り消したい場合は「取り消して戻る」のボタンを押してください。

⑨ 具合が悪くなった原因

該当するものをクリックし、「あった」を選択した場合は詳細を入力してください。

詳細はワープロと同じ要領で入力してください。

ただし、改行はできません。1行に納まらなければ自動で改行します。

入力できるのは漢字で60文字までです。

⑩ どうしたいのですか

該当するものをクリックしてください。

⑩保健室での処置

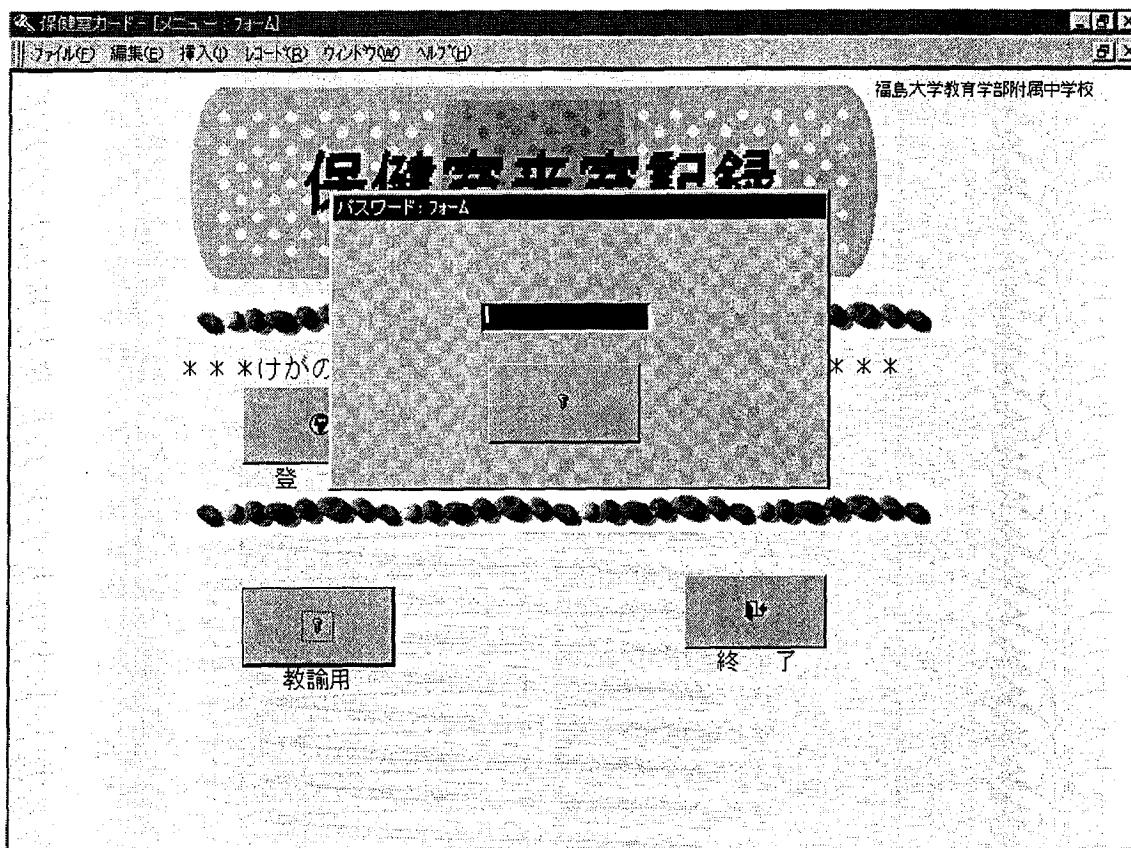
該当するものをクリックし、必要な項目を入力してください。

入力が終わったら

「登録して戻る」のボタンをクリックしてください。

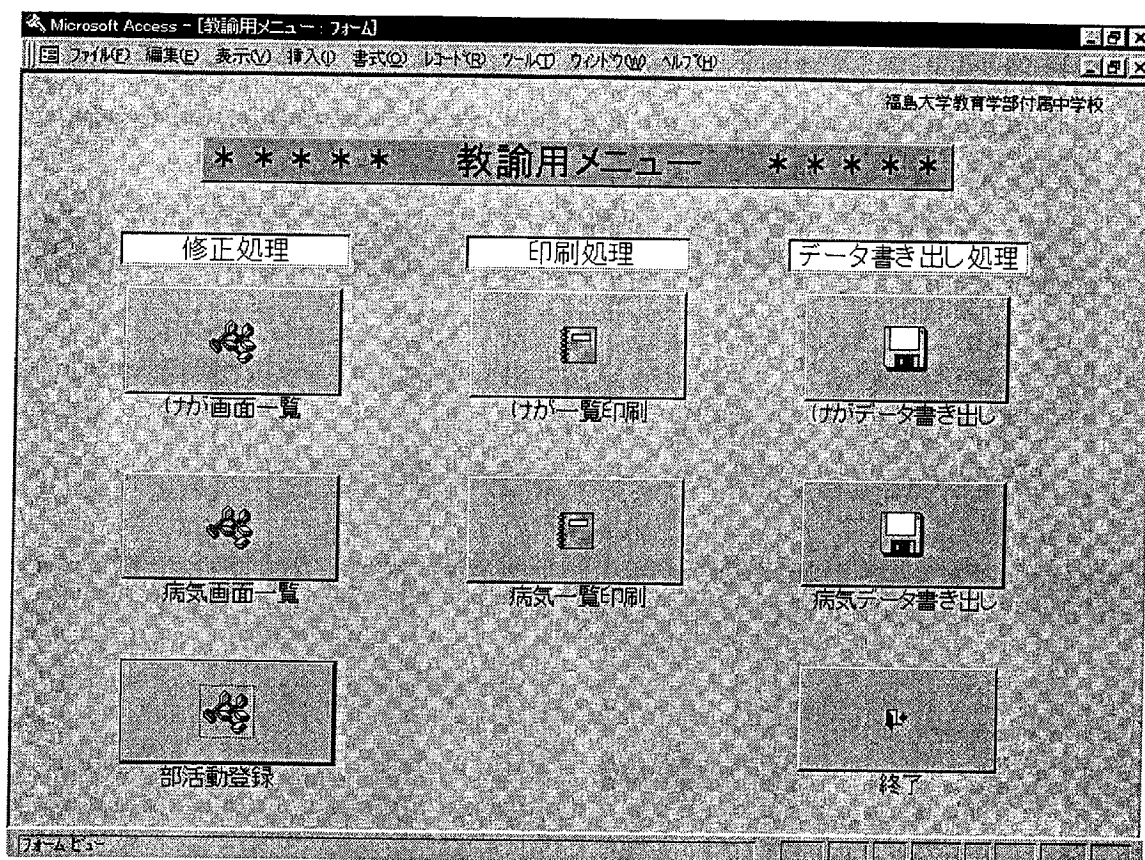
入力を止める場合は、「取り消して戻る」ボタンをクリックしてください。

5. 教諭用



「教諭用」ボタンをクリックすると、パスワード入力ボックスが表示されます。
パスワードは「fuzoku」です。
入力した文字は表示されません。
パスワードを入力したら、鍵の絵のボタンをクリックしてください。

6. 教諭用メニュー



修正処理メニュー

生徒用メニューで登録したデータの変更・削除が行えます。
また、登録画面で表示するための部活動の登録を行います。

印刷処理

登録してあるデータを日付指定で一覧印刷します。

データ書き出し処理

登録してあるデータをフロッピーディスクに書き出します。

終了ボタンでメインメニューに戻ります。

6. 1 けが画面一覧

けがの来室記録 一覧									
	98/10/01	130	3年	2組	12番	<input checked="" type="radio"/> 男子 <input type="radio"/> 女子	福島太郎	バレーボール	
			0年	0組	0番	<input type="radio"/> 男子 <input type="radio"/> 女子			

変更する場合は、該当行の、左のボタン をクリックしてください。変更用の画面を表示します。

削除する場合は、該当行の、右のボタン をクリックしてください。
メッセージが出たら、よろいを選択すれば削除されます。いいえで削除を中止します。

登録してあるデータが一覧表示されます。

変更を行う場合

当該データの左側のボタンをクリックします。

登録画面と同様の画面が表示されます。

削除を行う場合

当該データの右側のボタンをクリックします。

6. 2 「けがの記録」変更画面

保健室 未登録

けがの記録

来室時間 月/日 09/10/01 曜日 時:分 1:30

取り消して戻る 登録して戻る

学年氏名 3年 2組 12番 男子 女子 氏名 福島太郎 所属部活 バレーボール

けがの状況

いつ(発生時刻)

1 0 日前 2 登校途中 3 始業前

4 授業中 (校時 教科)

5 休み時間 6 昼休み 7 掃除中

8 校運動(部活動も含む) 9 下校途中

10 その他

どこで(発生場所)

1 校庭 2 中庭等 3 大走り 4 教室

5 廊下 6 バランタ 7 体育館 8 武道場

9 その他

どのようにして(原因・発生状況)

どのような詳細な状況

どこを

頭 顔 首 胸 背中 膝 腰 尻 脚 足

腕 手 眼 鼻 口 耳 手首 肘 膝 肩

足首 その他

直接部位の当てはまるところをクリックしてください。

前 後 左 右 上 下 内 外 甲 平 裏

指 づめ (親指 ひとさし 中指 薬指 小指)

傷病名

擦過傷(すりきず) 切傷 刺傷(どげ刺) 打撲 捻挫 つき指

火傷(やけど) 凍傷(しもやけ) 目異物混入 関節痛 陥凹傷

骨折 虫刺され 怪傷 その他

処置

消毒 湿布 包帯 保存 テーピング

受診勧告 医者へ移送 家庭連絡 救急車要請

薬名

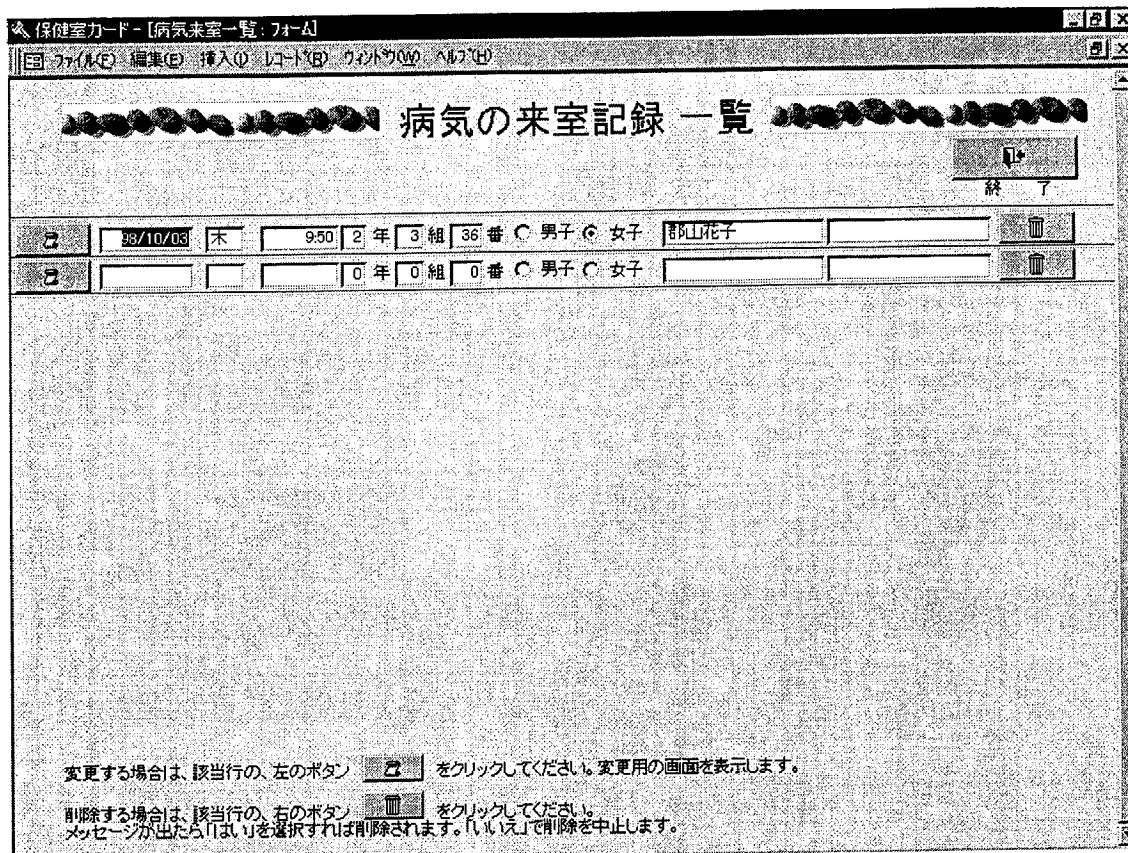
その他

入力方法は登録時と同じです。

変更が終わったら「登録して戻る」ボタンをクリックします。

変更を取り消したい場合は「取り消して戻る」ボタンをクリックします。

6. 3 病気画面一



病気の来室記録 一覧												
	18/10/03	木	9:50	2	年	3	組	36	番	<input type="radio"/> 男子 <input type="radio"/> 女子	山花子	
				0	年	0	組	0	番	<input type="radio"/> 男子 <input type="radio"/> 女子		

変更する場合は、該当行の、左のボタン をクリックしてください。変更用の画面を表示します。

削除する場合は、該当行の、右のボタン をクリックしてください。
メッセージが出たら「はい」を選択すれば削除されます。「いいえ」で削除を中止します。

登録してあるデータが一覧表示されます。

変更を行う場合

当該データの左側のボタンをクリックします。
登録画面と同様の画面が表示されます。

削除を行う場合

当該データの右側のボタンをクリックします。

6. 4 「病気の記録」変更画面

保健室カード - [来室者が]

ファイル(F) 編集(E) 挿入(I) コード(C) カンパウ(W) ヘルプ(H)

保健室 来室カード **病気の記録** 福島大学教育学部附属中学校

来室時間 月/日 06/10/06 曜日 木 時:分 9:50

学年氏名 2年 3組 36番 男子 女子 氏名 郡山花子 所属部活

授業中 休み時間 放課後 部活動 その他

検温・検脈 体温 38 度 3分 脈拍数 90 /分

具合が悪いところ

頭痛 腹痛 のどの痛み 発熱 気分不快 めまい
吐き気・嘔吐 下痢 月経障害 かせ その他

どこが

頭部 前 胸部 左 中央 右 詳しく
左 中央 右 腹部 左 中央 右
後ろ 下腹部 左 中央 右

ここをクリックして「生活状況」の入力をしてください。

具合が悪くなった原因 前にもこんな症状になったことが あった ない

保健室での処置

1 教室で経過観察 2 与薬 3 保健室で休養 経過観察 4 早退 (保護者の迎え 有 無)

帰宅または早退時間 10時 20分 5 その他

いつから

1 起床後 2 朝食後 3 登校く 直前 中 直後 から
4 授業中 5 昼食後 6 前日から 7 2~3日前から
8 その他

どこが

1 ズキンズキンと脈打つような痛み 2 押さえられるような痛み
3 鈍痛 4 キリキリと絞られるような痛み
5 シクシクと刺すような痛み 6 軽い痛み 7 激しい痛み
8 その他

どうしたいですか

1 薬がほしい 2 授業にもどりたい 3 ベッドで休みたい
4 保健室にいたい 5 早退したい 6 その他
7 相談したい

取り消して戻る 登録して戻る

入力方法は登録時と同じです。

変更が終わったら「登録して戻る」ボタンをクリックします。

変更を取り消したい場合は「取り消して戻る」ボタンをクリックします。

6. 5 部活動登録

区分			部活動名	終了
運動部	文化部	その他	バレーボール	🗑️
運動部	文化部	その他		🗑️
運動部	文化部	その他		🗑️

けがや病気の登録画面で、部活動を一覧から選択するためには、ここで登録しておく必要があります。

登録・変更 : 直接入力します。

削除 : 当該データの右側のボタンをクリックします。

6. 6 印刷処理

「けが一覧印刷」、「病気一覧印刷」とともに、クリックすると、日付指定の画面が表示されます。

日付指定

＊＊ 印刷する範囲を指定してください。＊＊

開始日 98/10/01 ~ 終了日 98/10/31

開始 終了

開始日・終了日 : 印刷するデータの範囲指定を行います。
入力した日付も範囲に含まれます。
開始日・終了日とも必ず入力してください。
入力が終わったら「開始」ボタンをクリックしてください。

6. 7 データ書き出し処理

フロッピーディスクをセットし、ボタンをクリックしてください。
現在登録されているデータをエクセルの形式ですべて書き出します。

けがの場合 : けが.xls
病気の場合 : 病気.xls

第 2 部

オークレア学校区 Media Coordinator : Linda Stelter
による本研究に関するレビュー

第2部 オークレア学校区 Media Coordinator : Linda Stelter による研究レビュー

本研究について、1998年度と1999年度にオークレア学校区の Media Coordinator（日本の教育委員会にはまだない職種で、情報に関する教育の指導主事にあたる） Linda Stelter より本研究に関するレビューと情報交換を行った。

1. オークレア学校区における情報教育

まず、背景となるウィスコンシン州の教育方針が資料1（Wisconsin's Model Academic Standards for Information and Technlogy Literacy）にもとづいて説明された。以下はその説明内容である。

(1) ウィスコンシン州学業に関する規準

歴史的にウィスコンシン州の市民は、教育に関して非常に熱心で、関心が強い。自分達の学校から非常に高い能力を得ることを期待している。教育的なニーズは、州の間では同じかもしれず、価値は異なっているかもしれない。基準は市民の集合的な価値を反映し、州、国家、および世界に存在している若い人々の経済的な機会のために、準備され仕立てられるべきものである。

ウィスコンシン州の「Model Academic Standards」を採用しなければならないかについては、義務でなくではなく、自発的に使うべきと言うことであり、日本のように中央の教育行政組織が地方の教育機関を統制することは無いと言うことである。

したがって、各学校区は州モデルの基準を採用するか、他地区のものを採用するか、または独自の規準を開発する場合がある。

学校区は学年階梯ごとのカリキュラム開発に、ガイドとしてこの規準を採用する場合がある。規準の使用により、教育の方法や教材、評価、教育と管理スタッフのために専門研修に意味のある変化をもたらしている場合がある。

(2) 定義

Infomafion と Technology Literacy は個人の能力であり、個人または他の人と共同して使用する道具であり、資源であり、過程である。そしてどんな媒体についても責任をもって情

報にアクセスし、評価するシステムである。そしてそれらの情報は、問題解決、明確な意志疎通、意志決定、新しい知識、製品、またはシステムを造るために使われるものである。このような能力形成が必要となった背景としては、今日の社会は情報と知識の空前の爆発に遭遇している。情報は3～5年ごとに倍増しており、以前には制役されていた未知の情報へのアクセスを技術が可能にしている環境のもとで、学生は難しい挑戦と無制限な機会の両方に直面している。

これらの規準は情報リテラシー、メディアリテラシー、技術リテラシーにおける現在の見解と統一された概念的な枠組みに関係づけられ相互関係にある。この枠組みは、メディアと技術の使用のための物理的なアクセススキルから、情報使用の知的なアクセス技術、独自に学ぶための技能と態度、最終的に、グループの中で責任をもって生産的に活動するのに必要なスキルまでの道筋を示すものである。

基準の目的は幼稚園から12学年までのカリキュラムをとおして、すべての学生のため、情報と技術内容および能力の規準を確認することである。規準は、学校カリキュラムの様々な内容と技能領域と統合されるように設計される。「情報と技術について学ぶ」よりも、むしろ「情報と技術で学ぶ」を重視する。

情報と技術能力の規準は、生徒が知り出来るようになるべき内容ないしカテゴリから4群にグループ化されている。最初の2つは、技術の使用と情報処理技能、後者の2つは、態度、感謝、自己学習、チームワークスキルと個人および社会的責任を扱っている。

A. Media and Technology

Students in Wisconsin will select and use media and technology to access, organize, create, and communicate information for solving problems and constructing new knowledge, products, and systems.

B. Information and Inquiry

Students in Wisconsin will access, evaluate, and apply information efficiently and effectively from a variety of sources in print, non print, and electronic formats to meet personal and academic needs.

C. Independent Learning

Students in Wisconsin will apply technological and information skills to issues of personal and academic interest by actively and independently seeking information; demonstrating critical and

discriminating reading, listening, and viewing habits; and, striving for personal excellence in learning and career pursuits.

D. The Learning Community

Students in Wisconsin will demonstrate the ability to work collaboratively in teams or groups, use information and technology in a responsible manner, respect intellectual property rights, and recognize the importance of intellectual freedom and access to information in a democratic society.

2 オークレア市の状況

(1) 情報教育カリキュラム開発の経過 資料 2 (The Research Process: Information Problem-Solving)

1990年に学校区のメディア専門家(Media Specialist)が研究のプロセス(Research Process)の開発に取り組んだの始まりである。

1992年、カリキュラム委員会が最初の生徒用のガイドを開発した。

1994年に資料2の「Research Process: Information Problem-Solving」の草稿が完成し、今日運用に供されている。表題のように当初(1999年)は入っていなかった「情報」が入った。Research Process: Information Problem-Solving構成は以下のとおりである。オークレア学校区プランの特色は、批判的思考力(Critical thinking)との関連を強く意識して展開していることである。

Pre-Search

- a. What it is
- b. Strategies/methods
- c. Tips

Search

- a. What it is
- b. Strategies/methods
- c. Tips

Interpret

- a. What it is
- b. Strategies/methods
- c. Tips

Apply

- a. What it is
- b. Strategies/methods
- c. Tips

Evaluate/Assessment

- a. What it is
- b. Strategies/methods
- c. Tips

Curriculum connection

- a. Critical thinking
- b. Writing process
- c. Cooperative learning

8. Resources

- a. Recommended reading list
- b. Resources available in the district

(3) オークレア学校区における情報スキルカリキュラム 資料3 (K-5 Learning Activities)

オークレア学校区における情報スキルカリキュラムとして、幼稚園から5年生までのカリキュラムが提示された。目的および内容は

民主的な社会における、自由な情報の獲得と使用は個人の発達の基本的である。情報の有能なユーザになる機会をすべての学生に提供することがこのカリキュラムの主要な目標である。この授業の結果、学生は系統的な方略であらゆる情報問題にアプローチし、情報の発見、使用、評価において批判的に考えられるようになるだろう。

本当に有効になるために、情報スキルカリキュラムは、カリキュラム全体と統合され、他のスキルと結合して教えられなければならない。

PRESEARCH

The student will have the skills to prepare for the search of information.

1.1 FORMULATE THE CENTRAL QUESTION

The students will be able to narrow the topic to be searched and to put it into the form of a question to be answered.

1.2 RELATE QUESTION TO PRIOR KNOWLEDGE

The student will make use of prior knowledge and information and relate it to the central question.

1.3 IDENTIFY KEY WORDS AND NAMES

The student will locate key words and names which will assist in locating information relative to the central question.

1.4 INTEGRATE CONCEPTS (BRAINSTORMING)

The student will organize the key words, noting relationships and concepts developed.

1.5 DEVELOP QUESTIONS TO ORGANIZE SEARCH

The student will develop a plan of how/where to search for answers to the central question.

(4) 現職教員研修の推進

資料4 (To : K-12 Media Specialists, Technology Specialists) は、情報教育推進のための現職教員研修の資料である。研修対象は各学校のメディア専門家 (Media Specialist) と技術専門家 (Technology Specialist) である。

メディア専門家は教科担当教師が兼務していることが多く、技術専門家はコンピュータやネットワーク設備の保守管理ができる専門家をおいている。

4, キーコンセプト「批判的思考」

先に見たように、情報教育の中では「批判的思考」が一つのキーコンセプトになっている。学校におけるその具体的展開例として健康教育をとりあげる。

ウィスコンシン州オークレア市学区教育委員会に配属され、健康教育とアルコール・薬

物使用の予防に関して指導的役割を果たしている（日本の教育員会の指導主事と保健係長の役割を合わせ持つ）District Coordinator / Health Education-AOD Prevention である Sharon Gilles の報告から、健康教育の基本的枠組みを紹介する。

1、生徒の健康問題

オークレアの健康教育について述べるにあたり、限られるた資料からであるが、健康教育の内容構成と密接に関連する生徒の健康問題について先ずふれておく。

日本の児童生徒に関しては各校で毎年定期的に健康診断を実施することが法律で義務づけられ実施されてきている。その結果は各学校、自治体、そして国レベルで集計され発育や健康問題の状況が分かるようになっている（文部省「学校保健統計」）。

一方米国では、藤田（1995）が報告しているように、統一した項目で健康診断が定期的に実施されるということではなく、州や各学区によってまちまちに実施されている。また、その情報が集約され、全体的状況としてされて公表するというものもないようである。健康に関する情報はあくまでも個人のものであり、個人の健康管理に役立たせる以外、全体の状況として集約し、公表することはない。

このような違いの背景には、国レベルで子どもの健康を管理するという日本の考え方と健康の管理は個々の責任の範囲でという米国の考え方の違いがある。つまりその社会における子どもの健康保護システムの考え方の違いである。現段階でどちらのシステムが良いのかという判断はできないが、次のような状況を見聞した。オークレア市の小学校2校（Lakeshore Elementary School、Meadowview Elementary School）訪問した際、学校で子どもが病気になったりした場合の対応を校長に聞いた。両学校とも日本の学校のように休養できるベッドがおいてある保健室はなく、職員室の一隅に備えられた組み込み式家具に、引き出し式のベッドがあるのみだった。子どもが具合悪くなった場合、すぐ子どもを引き取りに来るように養育者に連絡し、その間簡易ベッドでやすませる。しかし、養育者がすぐに引き取りにこれないこともあり、その場合校長や事務職員が子どもを看ることになり、実際困っているということであった。

オークレアの生徒の健康問題を直接把握できなかったが、米国のいくつかの州のスクーラーナースを対象に子どもの健康問題をとらえた Fujita（1992）を参考にして問題状況を概観しておくことにする。

表1は米国のスクーラーナースと日本の養護教諭にたいして「最も重要だと考える健康問

題はなにか」をきいた結果である。米国では「情緒的問題」や「神経・心身症的問題」などいわゆる心の健康問題が1位、2位を占めている。そして以下に「飲酒問題」、「薬物乱用」、「性的な問題」と続く。日本の場合も1位、2位を占めたのは心の健康問題である。それ以下は「性的な問題」、「一般の病気」、「虫歯」があげられている。心の健康問題は両国とも上位を占め共通して重要な健康問題であると認識されている。また、性的問題も割合もほぼ同じで共通に重要な問題だと認識されている。それ以外にあげられた問題で両国の違いがみられる。米国では「飲酒問題」、「薬物乱用」であり、日本は「一般の病気」や「う歯」である。

米国で上位を占めた心の健康問題には、離婚による片親家庭の増加、それに伴う家庭の養育機能の低下など、家庭の子育て機能の低下ないし崩壊が関与していることはよく知られたことである。そして米国でみられた問題は、10年くらいの時間差で日本でもみられるようになるといわれる。「飲酒問題」、「薬物乱用」は日本ではまだそれほど重要な健康問題と意識されるまで問題化してないが、近年の動向では中・高生のあいだに飲酒や薬物使用の問題が現れはじめている。

ここでは背景的要因との関連で米国の子どもの健康問題をみることは出来ないが、時間的に問題の発生が先行している米国の状況を検討することは、日本の子どもの健康問題の解決の方途を探るにさいしても示唆をえること多いと考えられ、さらなる課題としたい。

「性的な問題」に係わっては、オークレア学区教育委員会の入口近くに写真とともに掲げられていた教育重点目標の標語が状況を物語っていた。それは、園庭で遊ぶ赤ちゃんの写真の下に「母親は教育を受け、十代の母親の子どもは高校の育児室に」と記されていた。十代で子どもを持った生徒に、高校に育児室を設け、高校教育を保障しているのである。人口5万8千人ほどの小さな街でも事態はここまで進行しているのかと思ひ知らされた。

表 HEALTH PROBLEMS WHICH SNs/SNTs CONSIDER THE MOST SERIOUS
(The 5 most items)

	(%)				
U.S.A. n=239	Emotional disturbance	Neurotic & psychosomatic trouble	Alcohol use	Illicit substance abuse	Sex-related problems
	148 (61.9)	80 (33.5)	61 (25.5)	61 (25.5)	61 (25.5)
JAPAN n=338	Neurotic & psychosomatic trouble	Emotional disturbance	Sex-related problems	Common illnesses	Tooth decay
	175 (51.8)	173 (51.2)	87 (25.7)	63 (18.6)	62 (18.3)

2、オークレアの健康教育

(1)学区の健康教育カリキュラム編成と州及び連邦政府との関係

健康教育の内容構成に際しては基本的に州及び連邦政府から規制を受けることはない。州教育庁 (Department of Public Instruction) は健康教育のカリキュラム編成に関するガイドブックをだしているが、日本の学習指導要領のように法的拘束力はなく、あくまでも学区レベルでの健康教育カリキュラム編成の際の参考書としての位置づけである。ただ、州が高校卒業の要件として、1学期間 (1 semester) の健康教育の履修を義務づけていることや、健康教育の内容の一部になる性教育や飲酒及び薬物乱用防止教育には連邦政府の基準 (Guidelines) がある。この基準に準拠したプログラムを実施することで連邦政府から財政的援助を受けることが出来る仕組みになっている。これは先に見たように、深刻な問題状況に対応し、問題解決に向けての教育に取り組むように財政的側面から援助していく方策と考えられる。

オークレア市の前幼稚園段階から 12 学年までの健康教育カリキュラムは、以下に示した連邦政府の健康教育基準に基づいている編成され、実施されている。その内容は以下のとおりである。基準といっても、健康増進に向けてどのような能力を持った生徒に育てるかという方向性を示したものである。

連邦政府の健康教育基準

- A-生徒は健康増進と疾病予防に関連した概念を把握できる
- B-生徒は適切な健康情報と健康増進のための製品やサービスにアクセスする能力を発揮できる
- C-生徒は健康を増進する行動と健康上のリスクを減少させる実践能力を発揮することができる
- D-生徒は健康に影響を及ぼす文化、メディア、工業技術、その他の要因を分析することができる
- E-生徒は健康を増進するため人間相互のコミュニケーション能力を発揮することができる
- F-生徒は健康を増進するため目標設定、意志決定の技能を用いる能力を発揮することができる
- G-生徒は個人、家庭、地域の健康の推進者としての能力を発揮できる

(2)健康教育の基本的枠組み

オークレア学区では幼稚園から第9学年まで健康教育を行って。この各学年段階での健康教育カリキュラムは図1に示めた包括的健康プログラム (Comprehensive Health Program) を踏まえて作られている。三角形の真ん中に学習者が据えられ、三角形の辺の外側には地域、学校、家庭配置されている。学習者の周りに、能力の4側面として知識、態度、行動、技能があげられている。学習者の健康に係わる要因として、危険因子 (Risk)、関係性 (Relationship)、責任 (Responsibility) が双方向の矢印で関係づけられている。さらに学習者は批判的思考過程と、責任ある行動をとおして健康 (Wellness) に到達するという道筋が概念図に表現されている。この図の左右と次ページにモデルの説明が次のように述べられている。



Comprehensive Health Program

Mission Statement

A comprehensive health program includes three components: health services, healthful environment, and health education.

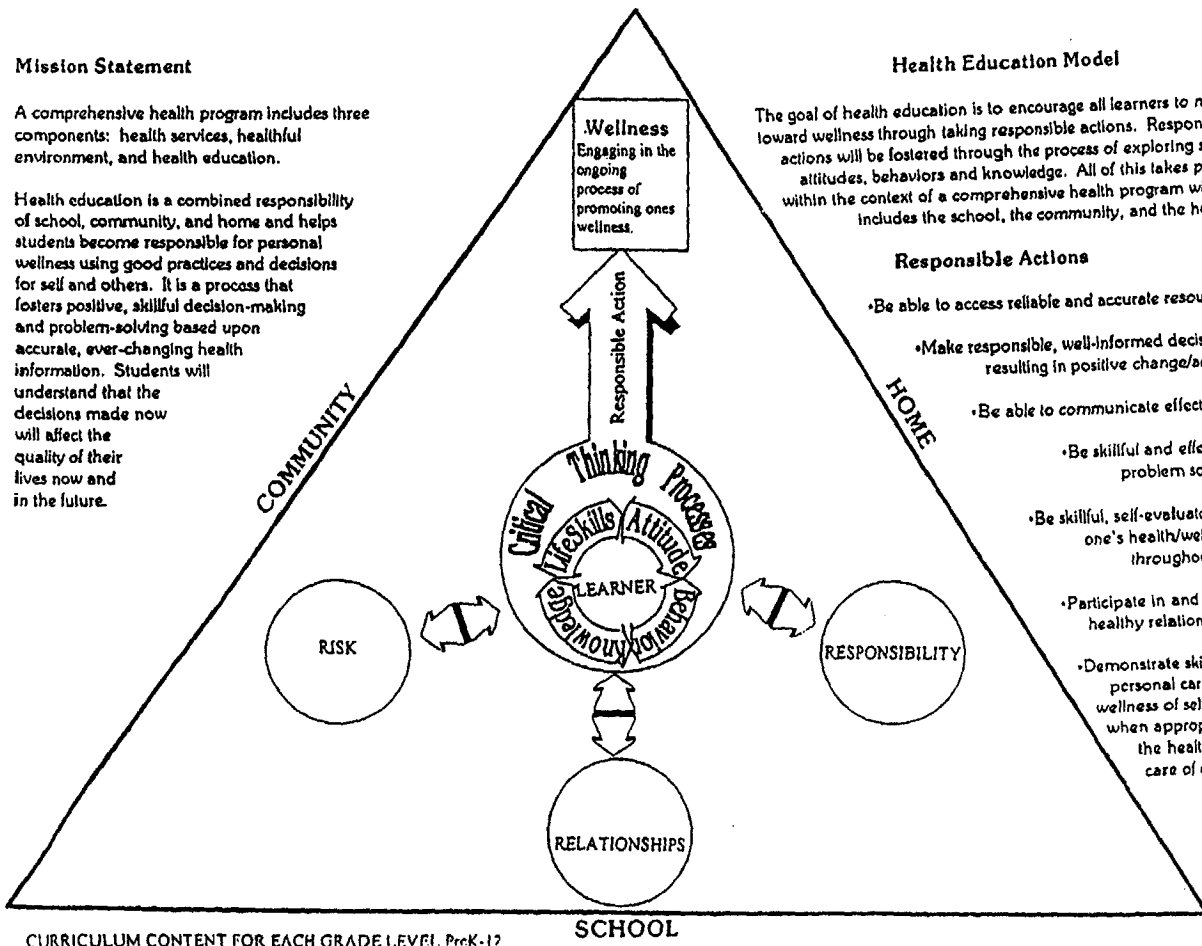
Health education is a combined responsibility of school, community, and home and helps students become responsible for personal wellness using good practices and decisions for self and others. It is a process that fosters positive, skillful decision-making and problem-solving based upon accurate, ever-changing health information. Students will understand that the decisions made now will affect the quality of their lives now and in the future.

Health Education Model

The goal of health education is to encourage all learners to move toward wellness through taking responsible actions. Responsible actions will be fostered through the process of exploring skills, attitudes, behaviors and knowledge. All of this takes place within the context of a comprehensive health program which includes the school, the community, and the home.

Responsible Actions

- Be able to access reliable and accurate resources
- Make responsible, well-informed decisions resulting in positive change/action
- Be able to communicate effectively
 - Be skillful and effective problem solvers
- Be skillful, self-evaluators of one's health/wellness throughout life
- Participate in and build healthy relationships
- Demonstrate skills for personal care and wellness of self, and when appropriate, the health and care of others



本任務に関する声明

包括的健康プログラム（計画）は保健事業、健康的な環境、健康教育の三つの要素を含む。健康教育は学校、地域、家庭の共同の責任でなされることであり、生徒が望ましい実践によって個人的な健康を大切にすることや自分自身と他人のための意志決定をできるように援助することである。それは積極的で上手な意志決定と正確で、普遍的な健康情報に基づく問題解決能力を育てる過程である。生徒は今なされる意志決定が現在と将来の生活の質に影響することを理解するであろう。

健康教育モデル

健康教育の目標は責任ある行動をとおしてすべての学習者をウェルネスへ到達させるよう支援することである。責任ある行動は技能、態度、行動、知識についての探索的過程をとおして育成される。学校、地域、家庭を含めた包括的健康プログラムの文脈の中でこれらすべてが行われる。

責任ある行動

- ・ 積極的変化と行動の中でよく知った上での意志 決定としての責任
- ・ 効果的に意志疎通が出来ること
- ・ 巧で効果的な問題解決者たれ
- ・ 生涯を通じて健康の自己評価について巧であれ
- ・ 参加し健康的な人間関係を築き上げよ

- ・ 個人のケアと健康ためそして時宜を得たとき他 人の健康とケアため技能を發揮せよ

「包括的」という語がつけられているのは、藤田（1995）によれば、内容が保健全般にわたっており、実施場面が教科の健康教育に限らず、保健に関連するあらゆる教科や特設の教育活動など全体で行われるものをさして **Comprehensive Health Education** と呼び、テーマ別の保健教育と区別していることによると思われる。

この概念図で最終のゴール健康が **Health** はなく **Wellness** と表現されている。WHO がその憲章前文で示した健康（**Health**）の定義は、健康の理想を示したもので、理想実現に向けて限りなく接近し続ける必要性を示しているものと解される。しかし人々は程度の差こそあれ何らかの異常や不具合を抱えながら生活しているのが現実であり、また生得的ない

し後天的に障害を持った人々は WHO の健康の定義に従えば健康はあり得ないことになる。病気がないことが健康とする概念に対して、内外の諸環境条件との間で営まれる個々人の可能性実現に向けた「生の質」に重きを置いた健康把握が Wellness である。たとえ病気や障害があっても、その人の可能性の個性的な実現という目的に向けて充実した生活をおくっている状態が健康ということである。このような Wellness としての健康を目標に掲げている点が注目される点のひとつである。

この概念図で注目すべきもうひとつの点は批判的思考である。図中の説明を以下に示す。

生徒は批判的思考の過程をとおして以下の生活 技能を学ぶ

1. Refusal Skills (拒否の技術)
2. Assertive Skills (確固たる態度をとる技術)
3. "I Message" (「わたしは主張する」)
4. Goal Setting (目標設定)
5. Cooperation (協力)
6. Conflict Resolution Peer Mediation (もめ事処理のための仲間による仲裁)
7. Decision Making (意志決定)
8. Problem Solving (問題解決)
9. Active Listening (積極的傾聴)
10. Access Resources (資源へのアクセス)
11. Communication (意志疎通)
12. Self Evaluation (自己評価)
13. Personal Intervention/Confrontation Skills (個人的介入と対面の技術)
14. Prediction (予測)
15. Other (その他)

オークレア市の中学校では上記の 1.と 6.を、また高校では 8.、10.、11.、14.をねらいとした健康教育をみることができた。詳細については稿をあらためて報告したい。

小倉 (1972) によれば、米国の健康教育の目標の中に批判的思考が出てくるようになるのは 1950 年代から始まった教育課程現代化の動きのなかであったとされる。全米教育協会と米国医学会の保健問題連合委員会の見解 (1965) のなかで、保健教育は保健の基本的概念の習得をとおして批判的な思考力、科学的に判断する能力の発達を重視する考え方がだされた。それまでの目標が習慣のような定型的な行動パターンを習得させることや知識

の習得に重点がおかれたものであり、大きな転換であった。この背景には当時の深刻な環境問題の存在があったとされる。これまでの目標観にもとづく状況適応的で固定的な習慣行動を学習する健康教育では、環境問題から生み出される新たな健康問題には対応できないことが明らかになった。将来、未知の健康問題にであうかも知れない学習者につけるべき能力として、批判的思考力と科学的判断力が提案されたのであった。しかしその後の米国の健康教育の中で、この目標観がどのように継承され発展されたのかは明らかではない。オークレア学区の健康教育の中に位置づけられた批判的思考は、米国における保健教育の目標観の変遷の中で如何なる位置を持つのか、そして現代の健康問題に対応する有効な目標たりうるのかを検討する必要がある。

参考文献

藤田和也 (1995) : アメリカの学校保健とスクールナース、大修館書店

Herbert J. Grover (1991) : A Guide to Curriculum Planning in Health Education、 Wisconsin Department of Public Instruction

Kazuya Fujita (1992) : Comparison between the Unaited States and Japan in School Nursing;Hitotsubashi Journal of Social Studies, Vol.24,No2

小倉 学(1972):保健体育科教育法、学文社

Program Description Guide 1996-1997

Wisconsin's Model Academic Standards for Information and Technology Literacy

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Introduction

Defining the Academic Standards

What are academic standards? Academic standards specify what students should know and be able to do, what they might be asked to do to give evidence of standards, and how well they must perform. They include content, performance, and proficiency standards.

- Content standards refer to *what* students should know and be able to do.
- Performance standards tell *how* students will show that they are meeting a standard.
- Proficiency standards indicate *how well* students must perform.

Why are academic standards necessary? Standards serve as rigorous goals for teaching and learning. Setting high standards enables students, parents, educators, and citizens to know what students should have learned at a given point in time. The absence of standards has consequences similar to lack of goals in any pursuit. Without clear goals, students may be unmotivated and confused.

Contemporary society is placing immense academic demands on students. Clear statements about what students must know and be able to do are essential to ensure that our schools offer students the opportunity to acquire the knowledge and skills necessary for success.

Why are state-level academic standards important? Public education is a state responsibility. The state superintendent and legislature must ensure that all children have equal access to high quality education programs. At a minimum, this requires clear statements of what all children in the state should know and be able to do as well as evidence that students are meeting these expectations. Furthermore, academic standards form a sound basis on which to establish the content of a statewide assessment system.

Why does Wisconsin need its own academic standards? Historically, the citizens of Wisconsin are very serious and thoughtful about education. They expect and receive very high performance from their schools. While educational needs may be similar among states, values differ. Standards should reflect the collective values of the citizens and be tailored to prepare young people for economic opportunities that exist in Wisconsin, the nation, and the world.

Developing the Academic Standards

Who wrote the academic standards and what resources were used? Academic standards for the non-state-assessed subjects were drafted by task forces appointed by the state superintendent. The task forces consisted of educators, parents, board of education members, and business and industry people. After reviewing national standards in the subject area, standards from other states, and standards from local Wisconsin school districts, each task force diligently and thoughtfully composed the academic standards for its respective subject.

How was the public involved in the standards process? Public input is crucial to the success of implementing high-quality standards. It was absolutely essential that the final academic standards reflect the values of Wisconsin's citizens.

Forums, focus groups, and input on the discussion drafts of the academic standards were used for getting citizens' ideas. Drafts of the standards were widely available throughout the state—including the DPI home page available on the Internet. All input received serious consideration.

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Using the Academic Standards

Must a district adopt Wisconsin's Model Academic Standards? Adopting Wisconsin's Model Academic Standards is voluntary, not mandatory. By law, however, districts must have academic standards in place by August 1, 1998, in reading and writing, geography and history, mathematics, and science. Districts may adopt the model state standards, or standards from other sources, or develop their own standards. Although not required by law to have standards in the other subjects, districts may choose to adopt or develop academic standards in those areas as well.

How will local districts use the academic standards? Districts may use the academic standards as guides for developing local grade-by-grade curriculum. Implementing standards may require some school districts to upgrade school and district curriculums. In some cases, this may result in significant changes in instructional methods and materials, local assessments, and professional development opportunities for the teaching and administrative staff.

What is the difference between academic standards and curriculum? Standards are statements about what students should know and be able to do, what they might be asked to do to give evidence of learning, and how well they should be expected to know or do it. Curriculum is the program devised by local school districts used to prepare students to meet standards. It consists of activities and lessons at each grade level, instructional materials, and various instructional techniques. In short, standards define what is to be learned at certain points in time, and from a broad perspective, what performances will be accepted as evidence that the learning has occurred. Curriculum specifies the details of the day-to-day schooling at the local level.

What is the link between statewide academic standards and statewide testing? Statewide academic standards in mathematics, English language arts, science, and social studies determine the scope of statewide testing. While these standards are much broader in content than any single Wisconsin Student Assessment System (WSAS) test, they do describe the range of knowledge and skills that may appear on the tests. If content does not appear in the academic standards, it will not be part of a WSAS test. The statewide standards clarify what must be studied to prepare for WSAS tests. If students have learned all of the material indicated by the standards in the assessed content areas, they should do very well on the state tests.

Relating the Academic Standards to All Students

Parents and educators of students with disabilities, with limited English proficiency (LEP), and with accelerated needs may ask why academic standards are important for their students. Academic standards serve as a valuable basis for establishing meaningful goals as part of each student's developmental progress and demonstration of proficiency. The clarity of academic standards provides meaningful, concrete goals for the achievement of students with disabilities, LEP, and accelerated needs consistent with all other students.

Academic standards may serve as the foundation for individualized programming decisions for students with disabilities, LEP, and accelerated needs. While the vast majority of students with disabilities and LEP should be expected to work toward and achieve these standards, accommodations and modifications to help these students reach the achievement goals will need to be individually identified and implemented. For students with disabilities, these decisions are made as part of their individualized education program (IEP) plans. Accelerated students may achieve well beyond the academic standards and move into advanced grade levels or into advanced coursework.

Clearly, these academic standards are for all students. As our state assessments are aligned with these standards and school districts adopt, adapt, or develop their own standards and multiple measures for determining proficiencies of students, greater accountability for the progress of all students can be assured. In Wisconsin this means all students reaching their full individual potential, every school being accountable, every parent a welcomed partner, every community supportive, and no excuses.

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Applying the Academic Standards Across the Curriculum

When community members and employers consider what they want citizens and employees to know and be able to do, they often speak of broad areas of applied knowledge such as communication, thinking, problem-solving, and decision-making. These areas connect or go beyond the mastery of individual subject areas. As students apply their knowledge both within and across the various curricular areas, they develop the concepts and complex thinking of educated persons.

Community members need these skills to function as responsible citizens. Employers prize those employees who demonstrate these skills because they are people who can continue learning and connect what they have learned to the requirements of a job. College and university faculty recognize the need for these skills as the means of developing the level of understanding that separates the expert from the beginner.

Teachers in every class should expect and encourage the development of these shared applications, both to promote the learning of the subject content and to extend learning across the curriculum. These applications fall into five general categories:

- 1) **Application of the Basics**
- 2) **Ability to Think**
 - Problem-solving
 - Informed decision-making
 - Systems thinking
 - Critical, creative, and analytical thinking
 - Imagining places, times, and situations different from one's own
 - Developing and testing a hypothesis
 - Transferring learning to new situations
- 3) **Skill in Communication**
 - Constructing and defending an argument
 - Working effectively in groups
 - Communicating plans and processes for reaching goals
 - Receiving and acting on instructions, plans, and models
 - Communicating with a variety of tools and skills
- 4) **Production of Quality Work**
 - Acquiring and using information
 - Creating quality products and performances
 - Revising products and performances
 - Developing and pursuing positive goals
- 5) **Connections with Community**
 - Recognizing and acting on responsibilities as a citizen
 - Preparing for work and lifelong learning
 - Contributing to the aesthetic and cultural life of the community
 - Seeing oneself and one's community within the state, nation, and world
 - Contributing and adapting to scientific and technological change

Overview of Information and Technology Literacy

Definition

Information and Technology Literacy is the ability of an individual, working independently or with others, to use tools, resources, processes, and systems responsibly to access and evaluate information in any medium, and to use that information to solve problems, communicate clearly, make informed decisions, and construct new knowledge, products, or systems.

Background

Today's society is witnessing an unprecedented explosion of information and knowledge. In an environment where information is doubling every three to five years and technology is providing increased access to previously restricted or unknown information sources, students face both difficult challenges and unlimited opportunities. The successful students, workers, and citizens of tomorrow will be self-directed, life-long learners.

Wisconsin's Model Academic Standards for Information and Technology Literacy identifies and defines the knowledge and skills essential for all Wisconsin students to access, evaluate, and use information and technology. These standards connect and interrelate current perspectives in information literacy, media literacy, and technology literacy into a unified conceptual framework. This framework demonstrates a progression from the physical access skills for the use of media and technology, to the intellectual access skills of information use, to skills and attitudes for learning independently, and finally to the skills needed for working responsibly and productively within groups.

Integration

The purpose of these standards is to identify information and technology content and performance standards for all students throughout the pre-kindergarten to grade twelve (PK-12) curriculum. The standards are designed to be integrated into the various content and skill areas of the school curriculum. The focus is on learning *with* information and technology rather than learning *about* information and technology. This integration will be varied and diverse based on the curricula of individual schools and school systems. The task force hopes that much reflective dialogue will occur in school districts among administrators, curriculum directors, library media specialists, technology coordinators, teachers, parents, and community members as each district adopts or modifies these standards and integrates them into the local instructional program for students.

The focus is on a sequential and broad set of information and technology content and performance standards that are necessary for full development of skills for "learning how to learn" addressed in the core areas of the PK-12 curriculum. The task force recognizes that some of these standards are included in other academic standards and believes this inclusion underscores the importance of information and technology literacy skills by providing entry points for integrating them into a variety of curricular areas. The task force also recognizes that elective programs or advanced courses that are not a part of the curriculum required for all students may require additional or very specific technology skills beyond those listed in these standards.

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Finally, it is important to recognize that accomplishing many of the performance standards listed here will require access to technology by individual students or student workgroups. The task force believes these standards can be achieved with a strong district commitment to a technological infrastructure including sufficient equipment, materials and staffing; appropriate technical support; and a comprehensive, ongoing program of teacher training and staff development.

Organization

The information and technology literacy standards are grouped into four categories or content standards specifying what a student should know and be able to do. The first two content standards focus on technology use and information processing skills. The latter two build upon these by adding performance standards that deal with attitudes, appreciation, independent learning, teamwork skills, and personal and social responsibility.

The four content standards are:

- A. **Media and Technology**—Students in Wisconsin will select and use media and technology to access, organize, create, and communicate information for solving problems and constructing new knowledge, products, and systems.
- B. **Information and Inquiry**—Students in Wisconsin will access, evaluate, and apply information efficiently and effectively from a variety of sources in print, non print, and electronic formats to meet personal and academic needs.
- C. **Independent Learning**—Students in Wisconsin will apply technological and information skills to issues of personal and academic interest by actively and independently seeking information; demonstrating critical and discriminating reading, listening, and viewing habits; and, striving for personal excellence in learning and career pursuits.
- D. **The Learning Community**—Students in Wisconsin will demonstrate the ability to work collaboratively in teams or groups, use information and technology in a responsible manner, respect intellectual property rights, and recognize the importance of intellectual freedom and access to information in a democratic society.

Each content standard is followed by performance standards that tell how students will show that they are meeting the content standard. Each performance standard includes a number of indicators that detail how students will demonstrate proficiency in a particular performance area. When students demonstrate proficiency in these performance standards and indicators, they will have mastered a literacy that is basic to success in the world of the 21st century.

In this document the term “media” refers to a wide range of formats including print, non print, and electronic. The term “information” reflects narrative, factual, and creative expressions in any of these formats. “Technology” refers to the application of knowledge, tools, and skills to solve practical problems and extend human capabilities. Though technology is often described as process, it is more commonly known by its products and tools and their effects on society. An extensive glossary is included in this document so the reader can find definitions of terminology used in these standards.

A. MEDIA AND TECHNOLOGY

CONTENT STANDARD

Students in Wisconsin will select and use media and technology to access, organize, create, and communicate information for solving problems and constructing new knowledge, products, and systems.

Rationale: Success in the 21st century will depend upon an understanding of and the capability to use current and emerging media and technology. The following performance standards list the behaviors which show that students recognize the various types of media and technology, know how to operate and use these technologies, and make sound judgments regarding the most effective technologies to use in specific situations. As the growth of media and technology continues to escalate, students meeting these performance standards will be better prepared to continue to learn and utilize them for the analysis, construction, and presentation of knowledge.



▶ BY THE END OF GRADE 4 STUDENTS WILL:

- A.4.1 Use common media and technology terminology and equipment
- identify and define basic computer terminology (e.g., software, hardware, cursor, startup/shutdown, storage medium, file, memory)
 - identify and explain the functions of the components of a computer system (e.g., monitor, central processing unit, storage devices, keyboard, mouse, printer)
 - demonstrate proper care and correct use of media and equipment
 - demonstrate the correct use of input devices (e.g., mouse, keyboard) and output devices (e.g., monitor, printer, speakers)
 - develop touch keyboarding techniques using both hands
 - save and backup files on a computer hard drive, storage medium, or server
 - demonstrate the use of still and video cameras and scanners
 - solve problems using the basic four arithmetic functions of a calculator when appropriate
 - operate basic audio and video equipment to listen to and view media programs
- A.4.2 Identify and use common media formats
- identify the wide variety of current media formats (e.g., video programs, magazines, computer software, audio cassettes, CD-ROM and DVD, newspapers, books, the Internet)
 - recognize the common organizational characteristics of print media (e.g., title page, table of contents, copyright statement, index)
 - differentiate among the common types of computer software (e.g., drawing programs, utilities, word processing, simulations)
 - listen to and view common audio and video media
 - access information using common electronic reference sources (e.g., indexes, almanacs, on-line catalogs, encyclopedias)
 - describe the purpose and use of a virus detection program
 - demonstrate how to open and run a software program from a local storage device or network server
 - create, save, move, copy, retrieve, and delete electronic files
 - incorporate graphics, pictures, and sound into another document

A.4.3 Use a computer and productivity software to organize and create information

- identify and define basic word processing terminology (e.g., cursor, open, save, file, I-beam, window, document, cut, copy, paste)
- produce a document using a word processing program
- edit a word-processed document using a spell checker
- demonstrate the text editing features of a word processing program (e.g., bold face, italics, underline, double spacing, different size and style of fonts) to produce a finished product
- explore special formatting features (e.g., borders, shading, centering, justification) of a word processing program
- identify a database and define basic database terms (e.g., file, record, field)
- use a prepared database template to enter and edit data, and to locate records
- identify a spreadsheet and explain basic spreadsheet terms (e.g., column, row, cell)
- use a prepared spreadsheet template to enter and edit data, and to produce and interpret a simple graph or chart

A.4.4 Use a computer and communications software to access and transmit information

- describe and explain an on-line information network
- generate, send, retrieve, save, and organize electronic messages
- log on and view information from preselected sites on the Internet
- use the functions of a web browser to navigate and save World Wide Web sites
- identify and use simple search engines and directories

A.4.5 Use media and technology to create and present information

- use draw, paint or graphics software to create simple signs, posters, banners, charts, visuals, etc.
- plan a multimedia production using an outline or storyboard
- create and present a short video or hypermedia program

A.4.6 Evaluate the use of media and technology in a production or presentation

- identify the media and technology used
- explain how well the media and technology contributed to its impact
- identify simple criteria for judging the quality of a production or presentation
- judge how well a particular production meets the identified criteria
- suggest ways to improve future productions or presentations



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**► BY THE END OF GRADE 8
STUDENTS WILL:**

- A.8.1 Use common media and technology terminology and equipment
- identify and define computer and networking terms (e.g., modem, file server, client station, LAN, Internet/ Intranet, data storage device)
 - demonstrate the correct operation of a computer system on a network
 - demonstrate touch keyboarding skills at acceptable speed and accuracy levels (suggested range 20-25 wpm)
 - organize and backup files on a computer disk, drive, server, or other storage device
 - recognize and solve routine computer hardware and software problems
 - use basic content-specific tools (e.g., environmental probes, measurement sensors) to provide evidence/ support in a class project
 - scan, crop, and save a graphic using a scanner, digital camera, or other digitizing equipment
 - use simple graphing calculator functions to solve a problem
 - capture, edit, and combine video segments using a multimedia computer with editing software or a video editing system
- A.8.2 Identify and use common media formats
- describe the operating and file management software of a computer (e.g., desktop, file, window, folder, directory, pull-down menu, dialog box)
 - identify the various organizational patterns used in different kinds of reference books
 - define the basic types of learning software (e.g., drill and practice, tutorial, simulation)
 - use electronic encyclopedias, almanacs, indexes, and catalogs to retrieve and select information
 - describe the various applications of productivity software programs (e.g., word processing, database, spreadsheet, presentation, communication, drawing, desktop publishing)
 - identify common integrated software packages or applications suites
 - use a graphics program to create or modify detail to an image or picture
- A.8.3 Use a computer and productivity software to organize and create information
- explain the use of basic word processing functions (e.g., menu, tool bars, dialog boxes, radio buttons, spell checker, thesaurus, page layout, headers and footers, word count, tabs)
 - use the spell checker and thesaurus functions of a word processing program
 - move textual and graphics data from one document to another
 - use graphics software to import pictures, images, and charts into documents
 - use a graphical organizer program to construct outlines or webs that organize ideas and information
 - compose a class report using advanced text formatting and layout styles (e.g., single and double spacing, different size and style of fonts, indents, headers and footers, pagination, table of contents, bibliography)
 - classify collected data and construct a simple database by defining fields, entering and sorting data, and producing a report
 - construct a simple spreadsheet, enter data, and interpret the information
 - plot and use different types of charts and graphs (e.g., line, bar, stacked, scatter diagram, area, pie charts, pictogram) from a spreadsheet program
 - incorporate database and spreadsheet information (e.g., charts, graphs, lists) in word-processed documents
- A.8.4 Use a computer and communications software to access and transmit information
- define basic on-line searching and Internet terminology (e.g., website, HTML, home page, hypertext link, bookmark, URL address)
 - send an e-mail message with an attachment to several persons simultaneously
 - access information using a modem or network connection to the Internet or other on-line information services
 - view, print, save, and open a document from the Internet or other on-line sources
 - use basic search engines and directories to locate resources on a specific topic
 - demonstrate efficient Internet navigation
 - organize World Wide Web bookmarks by subject or topic
- A.8.5 Use media and technology to create and present information
- use draw, paint, or graphics software to create visuals that will enhance a class project or report
 - design and produce a multimedia program
 - plan and deliver a presentation using media and technology appropriate to topic, audience, purpose, or content
- A.8.6 Evaluate the use of media and technology in a production or presentation
- determine the purpose of a specific production or presentation
 - describe the effectiveness of the media and technology used in a production or presentation
 - identify criteria for judging the technical quality of a production or presentation
 - judge how well the production or presentation meets identified criteria
 - recommend ways to improve future productions or presentations

**► BY THE END OF GRADE 12
STUDENTS WILL:**

- A.12.1 Use common media and technology terminology and equipment
- identify and define basic on-line and telecommunications terminology or concepts (e.g., bandwidth, satellite dish, distance learning, desktop conferencing, listserv, downlink, teleconference, virtual reality)
 - demonstrate proper keyboarding mechanics and touch type accurately (suggested range 30-35 wpm)
 - use a camcorder, VCR, multimedia computer, or editing equipment to produce a short video program
 - identify common graphic, video, and sound file formats (e.g., JPEG, GIF, MPEG, QUICKTIME, WAV)
 - use desktop or video conferencing equipment and systems
- A.12.2 Identify and use common media formats
- identify examples of agents, expert systems, or artificial intelligence (e.g., search engine, grammar checker, voice recognition, translators)
 - describe the common organizational patterns in different types of print media
 - identify and explain the use of common microforms
 - demonstrate how to import and export text, graphic, and sound files
 - distinguish between an individual productivity program and an integrated software program or applications suite
 - edit, import, and export movie or video files
- A.12.3 Use a computer and productivity software to organize and create information
- explain terminology and concepts connected with integrated software or an applications suite (e.g., tool palette, bulleted or numbered lists, macros, auto-correct, find-and-replace, stylesheets)
 - use an integrated program or applications suite to complete a class assignment
 - proofread and edit a document using the spell, thesaurus, and grammar checking functions of a word processing program
 - manipulate graphics objects in a word processing program (e.g., select, move, modify, delete, duplicate, arrange)
 - use desktop publishing and graphics software to produce page layouts in different formats (e.g., brochure, tri-fold, newsletter)
 - analyze data from a database and present conclusions in a document or report
 - construct a spreadsheet, enter data into cells, use mathematical functions to manipulate/process data, generate a chart or graph, and interpret the results
 - use a computer and graphical organizer software to generate modifiable flow charts, project time lines, organizational charts, or calendars
- A.12.4 Use a computer and communications software to access and transmit information
- choose most appropriate search engines and directories to locate specific resources on the Internet or other on-line services
 - distinguish between "pull" and "push" or "broadcast" methods of acquiring information from an on-line source
 - employ FTP (file transfer protocol) to retrieve and download computer files from a remote computer
 - use desktop conferencing, e-mail, or groupware to communicate with others regarding assignments or class projects
 - establish access to primary sources and other experts for class reports or projects
 - participate in an on-line discussion group or listserv appropriate to a content area
 - gather and organize statistical or survey data using e-mail, listservs, or on-line news or discussion groups
- A.12.5 Use media and technology to create and present information
- use draw, paint, graphics, or presentation software to visually communicate ideas or concepts
 - produce a multimedia program using text, graphics, moving images, and sound
 - develop a document or file for inclusion into a website or web page
 - participate in a desktop conferencing session to present and share information with others
- A.12.6 Evaluate the use of media and technology in a production or presentation
- assess the purpose and effectiveness of a production or presentation
 - evaluate the appropriateness and effectiveness of the media and technology used
 - determine criteria for judging the delivery, pacing, focus, and technical quality of the production or presentation
 - judge how well the production or presentation meets specified criteria
 - specify ways to improve future productions or presentations

- use an encyclopedia, dictionary, almanac, and atlas in print or electronic formats
 - use the index or table of contents of a book, magazine, or reference set to locate specific information
 - locate information from preselected Internet sites and web pages
- B.4.4 Evaluate and select information from a variety of print, nonprint, and electronic formats**
- preview selected resources using table of contents, index, and other simple scanning strategies
 - differentiate between fiction and nonfiction resources
 - distinguish between fact and opinion
 - determine timeliness and validity of information sources
 - recognize that graphics and images can be used to convey a message
 - identify the sponsoring organization or author for all resources
 - choose resources appropriate to their interests, abilities, and information need
- B.4.5 Record and organize information**
- take notes or record information in their own words
 - record the sources of information as notes are taken
 - recognize the need to identify the author of any information copied verbatim
 - arrange notes to help answer the information problem or question
 - organize information using simple outlining techniques
 - list basic bibliographic sources for information used
- B.4.6 Interpret and use information to solve the problem or answer the question**
- identify new information and integrate it with prior knowledge
 - determine if information is relevant to the information question
 - select information applicable to the information question
 - seek additional information if needed
 - apply the information gathered to solve the information problem or question
- B.4.7 Communicate the results of research and inquiry in an appropriate format**
- identify the audience for the product or presentation
 - identify whether the purpose of the product or presentation is to inform, entertain, or persuade
 - recognize the three common types of communication or presentation modes (written, oral, visual)
 - choose a presentation format (e.g., speech, paper, web page, video, hypermedia)
 - develop a product or presentation to communicate the results of the research
- B.4.8 Evaluate the information product and process**
- review the criteria to be used in judging both the product (or presentation) and the process
 - determine how well the product or presentation meets the original information need based on the criteria
 - review the process based on the criteria
 - suggest ways in which the process and product can be improved

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**► BY THE END OF GRADE 8
STUDENTS WILL:**

B.8.1 Define the need for information

- identify the information problem or question to be resolved
- relate what is already known to the information need
- formulate general and specific research questions using a variety of questioning skills
- revise and narrow the information questions to focus on the information need

B.8.2 Develop information seeking strategies

- identify relevant sources of information including print, nonprint, electronic, human, and community resources
- evaluate possible sources of information based on criteria of timeliness, genre, point of view, bias, and authority
- select multiple sources that reflect differing or supporting points of view
- identify and select keywords and phrases for each source, recognizing that different sources use different terminology for similar concepts
- organize ideas, concepts, and phrases using webbing, outlines, trees, or other visual or graphic tools
- focus search strategies on matching information needs with available resources

B.8.3 Locate and access information sources

- identify the classification system used in the school library media center, public library, and other local libraries
- locate materials using the classification systems of the school library media center and the public library
- use an on-line catalog and other databases of print and electronic resources
- recognize differences in searching bibliographic records, abstracts, or full text databases
- search for information by subject, author, title, and keyword
- use Boolean operators with human or programmed guidance to narrow or broaden searches
- use biographical dictionaries, thesauri, and other common reference tools in both print and electronic formats
- use a search engine to locate appropriate Internet or Intranet resources

B.8.4 Evaluate and select information from a variety of print, nonprint, and electronic formats

- examine selected resources for pertinent information using previewing techniques to scan for major concepts and keywords
- differentiate between primary and secondary sources
- distinguish between fact and opinion; recognize point of view or bias
- determine if information is timely, valid, accurate, comprehensive, and relevant

- analyze and evaluate information presented in charts, graphs, and tables
- locate indicators of authority for all sources of information
- select resources in formats appropriate to content and information need and compatible with their own learning style

B.8.5 Record and organize information

- use notetaking strategies including summarizing and paraphrasing
- record concise notes in a prescribed manner, including bibliographic information
- cite the source of specific quotations or visuals using footnotes, endnotes, or internal citation formats
- organize and compare information using graphic organizers, storyboarding, and other relational techniques
- organize information in a systematic manner appropriate to question, audience, and intended format of presentation
- record sources of information in a standardized bibliographic format

B.8.6 Interpret and use information to solve the problem or answer the question

- compare and integrate new information with prior knowledge
- analyze information for relevance to the question
- analyze findings to determine need for additional information
- gather and synthesize additional information as needed
- draw conclusions to address the problem or question

B.8.7 Communicate the results of research and inquiry in an appropriate format

- determine the audience and purpose for the product or presentation
- identify possible communication or production formats
- select a presentation format appropriate to the topic, audience, purpose, content, and technology available
- develop an original product or presentation which addresses the information problem or question

B.8.8 Evaluate the information product and process

- identify the criteria to be used in judging both the product (or presentation) and the process
- determine how well research conclusions and product meet the original information need or question based on the identified criteria
- assess the process based on identified criteria
- summarize ways in which the process and product can be improved

**BY THE END OF GRADE 12
STUDENTS WILL:**

- B.12.1** Define the need for information
- state the information problem or question in clear and concise terms
 - relate prior knowledge to the problem or question
 - develop specific research questions or a thesis statement based on the nature, purpose, and scope of project
 - conduct a preliminary search to determine if the research questions or thesis statement is clear and searchable; refine and revise if necessary
- B.12.2** Develop information-seeking strategies
- identify a full range of appropriate and available information from local, national, and global sources
 - determine and apply evaluative criteria to prioritizing potential sources
 - pursue a variety of resources reflecting differing points of view, cultures, and disciplines
 - identify and evaluate keywords, concepts, subject headings, and descriptors for each information source
 - organize ideas, concepts, and issues in a manner appropriate to the subject and purpose
 - develop a plan to obtain needed information using a variety of research and investigative strategies (e.g., interviews, questionnaires, experiments, surveys)
- B.12.3** Locate and access information sources
- identify the different classification systems used in local school, public and post-secondary libraries, and resource agencies
 - locate information using the classification system and catalog in use at a variety of libraries and resource agencies
 - use increasingly complex organizational features of print and electronic resources such as cumulative and cross-database indexes
 - use different search strategies for bibliographic citations, abstracts, and full-text resources in electronic formats
 - construct effective electronic and manual searches using keywords, phrases, Boolean logic, and limiters
 - determine when to use general or specialized print and electronic reference tools
 - compare, evaluate, and select appropriate Internet search engines and directories
- B.12.4** Evaluate and select information from a variety of print, nonprint, and electronic formats
- select information clearly related to the problem or question
 - evaluate information for stereotyping, prejudice, and misrepresentation
 - distinguish among fact, opinion, point of view, and inference
 - determine if sources are authoritative, valid, reliable, accurate, relevant, and comprehensive
 - evaluate graphic images for misleading presentation and manipulated data
 - determine authorship for all resources and identify points of agreement and disagreement among sources
 - select information in formats and genre most appropriate to content
- B.12.5** Record and organize information
- use data-gathering strategies that include summarizing, paraphrasing, comparing, and quoting
 - follow standardized notetaking processes and compile bibliographic information in an approved format
 - credit sources for all quotations, visuals, major ideas, and specific facts or data using accepted citation formats
 - analyze and relate information using a variety of relational techniques (e.g., graphic organizers, database reports, spreadsheet charts, graphs)
 - organize information in systematic manner for unity, coherence, clarity, and emphasis
 - compile a bibliography in a format stipulated by an accepted manual of style
- B.12.6** Interpret and use information to solve the problem or answer the question
- interpret new information to formulate ideas which address the question or problem using comparison, evaluation, inference, and generalization skills
 - synthesize new ideas, evidence, and prior knowledge to address the problem or question
 - draw conclusions and support them with credible evidence
- B.12.7** Communicate the results of research and inquiry in an appropriate format
- determine the audience and purpose for communicating the information
 - compare strengths and weaknesses of possible presentation methods and products
 - select the most appropriate format for the product or presentation
 - develop a product or presentation that utilizes the strengths of the medium and supports the conclusions drawn in the research effort
- B.12.8** Evaluate the information product and process
- establish the criteria to be used in judging both the product (or presentation) and the process
 - assess how well the research conclusions and product satisfy the defined information need
 - critique the process and identify steps which need further study, skill development, or practice
 - evaluate how the research question or problem, search strategy, resources, and interpretation could have been expanded or modified

C. INDEPENDENT LEARNING

CONTENT STANDARD

Students in Wisconsin will apply information and technology skills to issues of personal and academic interest by actively and independently seeking information; demonstrating critical and discriminating reading, listening, and viewing habits; and, striving for personal excellence in learning and career pursuits.

Rationale: Independent learning is central to the effective use of information and technology for personal, career, and recreational choices. Skills in independent learning are developed and used in the classroom and are essential for participation in education beyond the formal structures of schooling. Students should be able to select, evaluate, and relate literature, media, and other creative expressions of information to their own experience. Independent learners will demonstrate self-motivation in identifying information needs, solving information problems, evaluating solutions, and developing personal goals.



► **BY THE END OF GRADE 4 STUDENTS WILL:**

- C.4.1 Pursue information related to various dimensions of personal well-being and academic success
 - identify topics of interest and seek relevant information about them
 - recognize that information can be used to make decisions or satisfy personal interest
 - recognize that accurate information is basic to sound decisions
- C.4.2 Appreciate and derive meaning from literature and other creative expressions of information
 - choose fiction and other literature of personal interest
 - recognize that award winning books reflect literary and artistic excellence
 - relate literature and other creative expressions of information to personal experiences
 - compare their own interpretations of literature and other creative expressions of information with those of others
- C.4.3 Develop competence and selectivity in reading, listening, and viewing
 - choose materials at appropriate developmental levels
 - identify materials that reflect diverse perspectives
 - differentiate among written, oral, and visual forms of literature
 - recognize that media can be constructed to convey specific messages, viewpoints, and values
- C.4.4 Demonstrate self-motivation and increasing responsibility for their learning
 - contribute to group or classroom decisions about learning objectives
 - identify topics suitable for independent learning or in-depth exploration
 - apply prescribed criteria for judging success of learning projects
 - establish goals and determine steps for completing a project
 - assess progress and quality of work

**BY THE END OF GRADE 8
STUDENTS WILL:**

- C.8.1 Pursue information related to various dimensions of personal well-being and academic success
- identify topics of interest and seek relevant information about them
 - identify information appropriate for decision-making and personal interest
 - recognize that accurate and complete information is basic to sound decisions in both personal and academic pursuits
- C.8.2 Appreciate and derive meaning from literature and other creative expressions of information
- recognize that reviews, evaluations, and guidance from teachers, library media specialists, and others assist in the selection of appropriate literature and creative expressions of information
 - identify and use personal criteria for choosing literature and other creative expressions of information
 - relate literature and creative expressions of information to personal experiences
 - relate literature and creative expressions of information to other literature or creative expressions of information
- C.8.3 Develop competence and selectivity in reading, listening, and viewing
- choose materials at appropriate developmental levels
 - identify and select materials that reflect diverse perspectives
 - identify characteristics of common literary forms
 - recognize how words, images, sounds, and illustrations can be constructed to convey specific messages, viewpoints, and values
- C.8.4 Demonstrate self-motivation and increasing responsibility for their learning
- participate in decisions about group and classroom projects and learning objectives
 - identify and select topics of personal interest to expand classroom learning projects
 - recommend criteria for judging success of learning projects
 - establish goals and develop a plan for completing projects on time and within the scope of the assignment
 - evaluate progress and quality of personal learning
 - establish personal goals in pursuit of individual interests, academic requirements, and career paths

**BY THE END OF GRADE 12
STUDENTS WILL:**

- C.12.1 Pursue information related to various dimensions of personal well-being and academic success
- identify topics of interest and seek relevant information about them
 - evaluate information for decision-making and personal interest
 - recognize that accurate and complete information is essential to sound decisions in personal, academic, and career pursuits
- C.12.2 Appreciate and derive meaning from literature and other creative expressions of information
- recognize that core lists of classics and recommended titles for precollege reading provide for a well-rounded literary background
 - apply personal criteria for choosing literature and other creative expressions of information
 - relate literature and other creative expressions of information to personal experiences
 - compare and contrast examples of literature and creative expressions of information with other examples of literature and creative expressions of information
- C.12.3 Develop competence and selectivity in reading, listening, and viewing
- choose materials at appropriate developmental levels
 - identify and select materials that reflect diverse perspectives
 - contrast characteristics of common literary forms
 - evaluate how words, images, sounds, and illustrations are constructed to convey specific messages, viewpoints, and values to shape attitudes and influence action
- C.12.4 Demonstrate self-motivation and increasing responsibility for their learning
- make decisions about group and classroom projects and learning objectives
 - identify topics for independent study to meet individual learning needs and interests
 - develop and apply criteria for judging success of learning projects
 - establish goals, plans, budgets, and timelines for completing a project
 - recognize gaps in personal knowledge and apply strategies for addressing them
 - evaluate progress and quality of personal learning
 - articulate personal goals in pursuit of individual interests, academic requirements, and career paths

D. THE LEARNING COMMUNITY

CONTENT STANDARD

Students in Wisconsin will demonstrate the ability to work collaboratively in teams or groups, use information and technology in a responsible manner, respect intellectual property rights, and recognize the importance of intellectual freedom and access to information in a democratic society.

Rationale: As a member of a community of learners, each individual's actions impact all members of that community. The workplace in the 21st century will be a collaborative environment requiring a high level of communication, problem-solving, and teamwork skills. The concept of the larger learning community suggests that all of us—students, teachers, administrators, parents, and other citizens—are interconnected in a lifelong quest to understand and meet our constantly changing information needs. The new learning community is not limited by time, place, age, occupation, or individual fields of study. Rather, this community is linked by mutual respect for the opinions and work of others; by interests and needs; by open and equitable access to information; and by a continually expanding and improving global telecommunications network.

► **BY THE END OF GRADE 4 STUDENTS WILL:**

- D.4.1 Participate productively in workgroups or other collaborative learning environments
 - share information and ideas with others
 - respect the ideas of others
 - articulate workgroup goals and individual responsibilities within the group
 - participate in the development of individual and workgroup tasks and priorities
 - recognize that individual achievement is linked to the successful completion of workgroup projects
 - complete workgroup projects to meet an established timeline
 - review workgroup projects and suggest improvements
- D.4.2 Use information, media, and technology in a responsible manner
 - return all borrowed materials on time
 - identify the school's rules on student use of the Internet and other resources
 - demonstrate use of the Internet and other on-line sources consistent with the school's acceptable use policy
 - employ proper etiquette in all forms of communication
 - recognize that altering or destroying another person's program or file constitutes unacceptable behavior
 - differentiate between copying and summarizing
 - recognize that using media and technology to defame another person or group constitutes unacceptable behavior
 - recognize the need for privacy of personal information
- D.4.3 Respect intellectual property rights
 - explain the concept of intellectual property rights
 - describe how copyright protects the right of an author or producer to control the distribution, performance, display, or copying of original works
 - recognize that the copying of commercial or licensed media is a violation of the copyright law
 - identify violations of the copyright law as a crime for which there are serious consequences
 - explain why the use of all or parts of another person's work requires prior permission or citation
 - recognize that a quoted work must be stated in the author's exact words
 - list sources quoted verbatim and visuals used in a presentation
 - recognize that reports or articles they write must be put in their own words
- D.4.4 Recognize the importance of intellectual freedom and access to information in a democratic society
 - define the concept of intellectual freedom
 - identify examples of censorship
 - recognize the importance of free and open access to information for all citizens
 - acknowledge the right of classmates to express opinions different from their own
 - describe situations or conditions where information is repressed or restricted

**► BY THE END OF GRADE 8
STUDENTS WILL:**

- D.8.1 Participate productively in workgroups or other collaborative learning environments
- collaborate with others to identify information needs and seek solutions
 - demonstrate acceptance to new ideas and strategies from workgroup members
 - determine workgroup goals and equitable distribution of individual or subgroup responsibilities and tasks
 - plan for the efficient use and allocation of time
 - complete workgroup projects on time
 - evaluate completed projects to determine how the workgroup could have functioned more efficiently and productively
- D.8.2 Use information, media, and technology in a responsible manner
- return all borrowed materials on time
 - describe and explain the school policy on technology and network use, media borrowing, and Internet access
 - demonstrate responsible use of the Internet and other electronic resources consistent with the school's acceptable use policy
 - recognize that using media and technology to defame or libel another person or group constitutes unacceptable behavior
 - identify and define the consequences of violations to the school's policies on media and technology use
 - recognize the need for privacy and protection of personal information
- D.8.3 Respect intellectual property rights
- define the purpose of copyright and copyright law
 - identify what kinds of works of authorship can be copyrighted
 - explain the concept of "fair use" as it pertains to the copyright law
 - recognize that the "fair use" provisions may differ depending on the media format
 - relate examples of copyright violations
 - cite the source for words which are quoted verbatim and for pictures, graphics, and audio or video segments which are used in a product or presentation
 - explain and differentiate the purposes of a patent, trademark, and logo
- D.8.4 Recognize the importance of intellectual freedom and access to information in a democratic society
- explain the concept of intellectual freedom
 - identify examples and explain the implications of censorship in the United States and in other countries
 - explain the importance of the principle of equitable access to information
 - compare and contrast freedom of the press in different situations and geographic areas
 - recognize that the free-flow of information contributes to an informed citizenry resulting in sound decisions for the common good

**► BY THE END OF GRADE 12
STUDENTS WILL:**

- D.12.1 Participate productively in workgroups or other collaborative learning environments
- collaborate with others to design and develop information products and solutions
 - incorporate effective group processes and shared decision-making in project development
 - specify and detail workgroup goals and individual and subgroup responsibilities
 - finalize workgroup strategies, resources, budget, and timeline
 - allocate time for a project based on an inventory of the responsibilities of workgroup members
 - complete specific projects within a timeline and budget
 - critique completed projects and workgroup processes for future improvement
- D.12.2 Use information, media, and technology in a responsible manner
- return all borrowed materials on time
 - assess the need for different information policies and user agreements in a variety of settings (e.g., private employer, university, government agency)
 - demonstrate use of the Internet and other resources consistent with acceptable use policies
 - recognize that using media or technology to defame, libel, or misrepresent another person or group constitutes unacceptable behavior
 - identify and define consequences of violations to the school's policies on media and technology use
 - recognize the need for privacy of certain data files or documents
- D.12.3 Respect intellectual property rights
- explain the difference between copyright and copyright registration
 - explain why "fair use" is permitted for educational purposes but not in "for profit" situations
 - distinguish among freeware, shareware, and commercial software
 - recognize the legal consequences of plagiarism and the need for personal authenticity in their work
 - explain conditions under which permission must be obtained for the use of copyrighted materials
 - describe how to correspond with authors, publishers, or producers to obtain permission to use copyrighted materials in their work
- D.12.4 Recognize the importance of intellectual freedom and access to information in a democratic society
- summarize how the basic principles of democracy relate to intellectual freedom
 - distinguish between intellectual freedom as it relates to children versus adults
 - investigate a specific censorship situation (e.g., challenge to a book or magazine in a local library)
 - recommend strategies for ensuring that others have equitable access to information, media resources, and technology
 - project what conditions might result if intellectual freedom were ignored in their own community or in the United States

Summary

Media and Technology

- Use common media and technology terminology and equipment
- Identify and use common media formats
- Use a computer and productivity software to organize and create information
- Use a computer and communications software to access and transmit information
- Use media and technology to create and present information
- Evaluate the use of media and technology in a production or presentation

Information and Inquiry

- Define the need for information
- Develop information seeking strategies
- Locate and access information sources
- Evaluate and select information from a variety of print, nonprint, and electronic formats
- Record and organize information
- Interpret and use information to solve the problem or answer the question
- Communicate the results of research and inquiry in an appropriate format
- Evaluate the information product and process

Independent Learning

- Pursue information related to various dimensions of personal well-being and academic success
- Appreciate and derive meaning from literature and other creative expressions of information
- Develop competence and selectivity in reading, listening, and viewing
- Demonstrate self-motivation and increasing responsibility for their learning

The Learning Community

- Participate productively in workgroups or other collaborative learning environments
- Use information, media, and technology in a responsible manner
- Respect intellectual property rights
- Recognize the importance of intellectual freedom and access to information in a democratic society



The Research Process: Information Problem-Solving

A Guide for Teachers

3/94 - Draft



EAU CLAIRE
AREA SCHOOL DISTRICT

Acknowledgement:

This guide represents the work of many different staff members of the Eau Claire Area School District. Thanks to the district media specialists who developed the framework for the Research Process in 1990. To the curriculum committee who developed the initial student guide--Kris Mason, Carol Miller, Pat Telisak, Jean Sandberg, and Dawn Pearson in 1992. And to Connie Russell, Arlene Radtke, Mary Kay Miller, Vance Mead, and Sue Merlo, who researched and wrote portions of the Guide for Teachers.--Carol Nelson, editor.

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Introduction

Purpose

Providing all students with the opportunity to become effective users of information is the primary goal of **The Research Process**.

Developed by the Eau Claire Area School District library media specialists, **The Research Process** provides students with the skills to approach every information problem with a systematic strategy and to think critically in finding, using, and evaluating information.

To be truly effective, **The Research Process** must be integrated into the curriculum and taught in conjunction with other skills. Successful implementation of **The Research Process** requires classroom teachers to work together with other school staff; i.e. reading teachers, special education teachers, teachers of gifted and talented, and library media specialists.

Overview

The Research Process breaks the information problem-solving process down into five steps. These steps are as follows:

- 1.0 PRE-SEARCH
The student will have the skills to prepare for the search of information.
- 2.0 SEARCH
The student is able to locate and use appropriate resources of information.
- 3.0 INTERPRET
The student will evaluate and select information from the resources found.
- 4.0 APPLY
The student will present the information in an appropriate manner.
- 5.0 EVALUATE (THE PROCESS)
The student will evaluate whether the search plan which he/she developed resulted in a successful resolution of the central question.

This guide for teachers provides detail on each step of the process and offers teaching strategies and troubleshooting tips. A complete chart of the process can be found in Appendix C.

Affective Domain

Teachers need to be aware of the broad range of feelings students go through as they research. Feelings range from uncertainty to relief. Teachers need to realize this range of feelings will occur for students. Teachers should tell students that to feel confused and frustrated along the way is a normal part of research.

In the book, The Research of School Library Media Centers, Carol C. Kuhlthau suggests that from the student's perspective the process of seeking information involves a complex process of construction. Kuhlthau points out six stages or psychological steps to research:

Six Stage Model Of The Information Search Process

1. **Task Initiation** (Pre-search)
This stage is characterized by feelings of uncertainty and apprehension at the task ahead.
2. **Topic Selection** (Pre-search)
A feeling of optimism is commonly experienced after a topic has been chosen.
3. **Prefocus Exploration** (Interpret)
This is a difficult time for most students, when they experience confusion and frustration and may even doubt their ability to complete the task. Confusion and doubt are present until a focus begins to emerge.
4. **Focus Formulation** (Interpret)
This is the turning point of a search, when students have learned about their topic from the information they encounter and have formed a personal perspective or focus within the topic.
5. **Information Collection** (Apply)
This stage occurs after students have a focused point of view of the topic, at this point they gather information with more confidence and a sense of direction. Interest and motivation increase at this stage.
6. **Search Closure** (Evaluate)
At this stage feelings of relief are common, but feelings of anxiety about the presentation also begin to be noted. After the presentation students often experience satisfaction and accomplishment if all has gone well and disappointment if it has not.

Pre-Search

What it is

In the **Pre-Search** step, students spend time preparing for the search of information. More specifically the students:

- 1.1 **FORMULATE THE CENTRAL QUESTION**
The student will be able to narrow the topic to be searched and to put it into the form of a question to be answered.
- 1.2 **RELATE QUESTION TO PRIOR KNOWLEDGE**
The student will make use of prior knowledge and information and relate it to the central question.
- 1.3 **IDENTIFY KEY WORDS AND NAMES**
The student will locate key words and names which will assist in locating information relative to the central question.
- 1.4 **INTEGRATE CONCEPTS (BRAINSTORMING)**
The student will organize the key words, noting relationships and concepts developed.
- 1.5 **DEVELOP QUESTIONS TO ORGANIZE SEARCH**
The student will develop a plan of how to search for answers to the central question.
- 1.6 **REVIEW/RE-EVALUATE SOURCES**
If needed, the student will revise and redefine the central questions based upon resources available.

Students may use one or more of the skills mentioned above to provide focus and direction to their search.

Strategies and Methods

The Pre-Search step works well with the Pre-Writing step in The Writing Process. (See Chapter 7) The many techniques which help students organize thoughts for writing also help organize thoughts for searching for information, such as:

- * **Jot-listing** - Students quickly write down what they already know about the topic. From this they can then determine what additional information they need.
- * **Brainstorming** - Either in large groups or as an individual, students expand or narrow topics.
- * **Webbing** - Through the use of a concept web, clusters of ideas are developed. This technique helps students develop the scope and direction for their research. This process also may lead to developing an outline.
- * **Outlining** - Developing an outline of the topic, can provide structure to the search for information as well as the application of the information.
- * **Graphic organizers** can help students understand relationships between concepts and ideas. The bibliography in Chapter 8 contains several excellent sources.
- * **Frame questions** around topic. Once a topic has been selected, questions framed around the topic will help provide direction to the search for information.
- * Develop a **search strategy**. Before leaving this step, students will actually develop a search strategy by which they will plan how and where they will find the information. See appendix D for several samples.

- * **Time management** - The teacher needs to help students manage their time during a long term project.
 - a) Break the task into manageable parts
 - b) Develop a logical order for each task
 - c) Establish a timeline with specific deadlines for each task

The entire class can set deadlines or each student can develop individual plans.

- * **Assessment** - Students need to know at the beginning how their project will be assessed. They need to know the criteria for evaluation; students can help develop the criteria. Teachers also provide models of the performance.

Tips

Meandering - some students seem to have a more intuitive approach to research. As teachers, we need to provide direction but not stifle the student's own style. Eisenberg and Berkowitz in Information Problem Solving discuss the following styles, (p. 13):

1. **Holistic or serialistic**
The holistic student first looks at all the information, gets the big picture, then works through each sub point. The serialist student finds a source, uses it and keeps going until enough information is found.
2. **Systematic or intuitive**
The systematic student follows a sequential path. It has order and follows a sequence. Intuitive students may arrive at the same end result but seem to be meandering. They need time to muddle around.

Modeling - Teachers need to model each step of the process and coach the student as he/she does the same. One cannot just tell students what to do, one must also demonstrate the skill.

Time - Teachers must plan for enough class time for students who are engaged in an in-depth research process.

Researchable topics - In their book, Brainstorms and Blueprints, Stripling and Pitts identify four key questions need to ask when selecting researchable topics:

1. **Are Resources Available?**
Students usually cannot predict whether materials might be available on a particular subject in a typical school media center. Stripling and Pitts suggest teachers and media specialists can ward off potential trouble by (1) telling students that the topic is not going to work (2) having students list several potential subjects to research.

2. **Is The Subject Manageable?**
Some topics are not manageable because the topic, while interesting, is too complicated. Some students can handle complex searches and the judgement of the teacher and media specialist in determining appropriateness of topic matched with student interest and ability will determine if the student should pursue the topic.
3. **Can The Subject Be Thoughtfully Researched?**
Researching issues and concepts rather than tangible topics promotes thoughtful research. Tangible topics can become thoughtful according to Stripling and Pitts if students narrow them to a problem or question and combine the tangible aspect with a concept or issue.
4. **Is The Student Too Emotional About The Topic?**
It is important to help students choose topics they can be objective and thoughtful about in their thinking. Emotional issues make it difficult for students to remain objective. It is helpful to choose a topic which allows a student to research both sides of an issue.

Chapter 3

Search

What it is

In the **Search step**, students locate and use appropriate sources of information. More specifically, the students:

- 2.1 **LOCATE SOURCES OF INFORMATION**
The student knows what resources are available and can locate them.
- 2.2 **SEARCH FOR RELEVANT INFORMATION**
The student can successfully access the information once the resource has been located.

Strategies and Methods

During this step, students use resources in the classroom, in the school media center and in the community. The school media specialist and teacher provide training on what resources are available and how to use them. Some resources, such as online computer sources, require special training and special access codes.

The following provides some approaches to use.

- * **Orientation to the IMC** - Find out how familiar students are with the location of resources by using a map pre-test. Give them the floorplan of the IMC and have them label the location of key resources.
- * **Use pathfinders.** The teacher or school media specialist keeps track of the search path used to find popular topics. Subject headings from key sources are noted. See the sample pathfinder in Appendix D developed at the University of Wisconsin-Eau Claire.

Pathfinders usually contain 1) a short definition of the subject, 2) a short introduction to the concept, 3) recommended subject headings and/or key words to use, 4) recommended resources to use.

- * **Electronic search strategies** - Boolean logic may be useful with some electronic databases. See Appendix D for sample electronic search forms.
- * **List of sources** - Students are sometimes too narrow in identifying potential sources of information. See List of Sources in Appendix D.
- * **Collaborative/peer searching** - Students can help each other locate and use sources of information. The more proficient can help the novices.

Interpret

What it is

In the **Interpret** step, students evaluate and select information from the identified resources. More specifically, the students:

- 3.1 **SELECT AND EVALUATE INFORMATION**
The student will screen the information and select what is most relevant to answering the central question.
- 3.2 **INTERPRET, INFER, ANALYZE AND PARAPHRASE**
The student will read for understanding and develop the answer to the central question.

Strategies and Methods

For many students, this step can be the most difficult. The teacher must give students help in interpreting information and then making it their own.

- * **Reading strategies** - In order for the student to evaluate and select information, the student must use a variety of reading strategies.

PREVIEWING - One of the most important strategies is previewing. Before a student begins reading, he/she should preview the material to determine how the material is organized and what information the material contains. Previewing may include one or more of the following: looking at titles and headings; examining pictures, charts, and diagrams; skimming for general ideas; reading the introductory and concluding paragraphs.

SELF-QUESTIONING - Because information processing begins with the formulation of the central question, it is logical that the student keep the central and related questions in mind as he/she reads. In addition, the student should ask "How is this information related to what I already know?" , "Do I understand this information?" and "If not, what can I do to understand it?"

USING A VARIETY OF READING RATES - A good reader varies his/her reading rate depending on the reading purpose and the type and difficulty of the material.

At times the student may scan looking for key words and only the information necessary to answer straight-forward questions. In addition, the student should be encouraged to scan to see if the material contains the information needed to answer his/her questions before he/she reads more thoroughly.

The student may use skimming to rapidly read for general ideas. Early in the research process it is helpful to skim many articles in order to build background knowledge on the chosen topic.

Finally, the student should use a slower rate for deep processing of the information. This slower rate, sometimes referred to as study reading, includes reading section by section, going through the material several times, taking notes, and paraphrasing the information.

ANALYZING STRUCTURE OR ORGANIZATIONAL PATTERNS - Just as narrative text follows a story structure, expository materials have patterns of organization. The most common patterns are simple listing, time order, comparison/contrast, and cause and effect. As the student reads, he/she should note how the material is organized and use the organizational pattern to aid reading comprehension and note-taking.

UNDERLINING OR HIGHLIGHTING - When marking on resource materials is allowed, the student should underline or highlight the most important information. Underlining or highlighting stimulates active reading, and the act of deciding what information is important enough to merit underlining boosts comprehension.

TAKING NOTES - The student should keep some record of the information he/she locates. The notes should be organized around the central question, key words, and concepts. Listing ideas under category headings, completing a concept map, filling out an outline, or using a question and answer format are notetaking methods that work well for most students.

Tips

- * **Plagiarism** - Students must realize the meaning of plagiarism and understand the legal implications. Electronic sources of information make "copying" even easier; therefore, the teacher needs to check the process along the way - from notes to finished product - to see the student's search path.
- * **Copyright** - Students must develop the habit of recognizing copyright and providing adequate credit for works cited. Multi-media productions and desktop publishing underscore the need for care with copyright with both visual as well as print media.
- * **Summarize/Paraphrase** - One way to avoid plagiarism is to have students summarize or paraphrase the information. These techniques can be taught together with the process of notetaking.
- * **Cornell method of notetaking** - The double column method used in the Cornell System can help students begin to interpret information.
- * **Develop own method of notetaking**
Teachers may develop their own method of notetaking. Notes may be taken under subtopic headings. At the primary grades, these notes may look more like key word notetaking. As they get older, their notes may become key words with phrases. (Haycock, p. ?)
- * Keep track of **sources**, ie. bibliography. Students need to be given a model of how they must reference their sources. Older students may need to follow an accepted format, i.e. younger students can follow a more simplified model, see Appendix D for samples.
- * **Share interpretation** of information in small groups. Members ask for clarification or point out errors in logic as a part of a cooperative learning activity.

* **Reading for understanding**

The following suggestions may help when the student experiences difficulty understanding the resource materials.

READING WITH A PARTNER - One partner reads while the other one listens. When the reader stops reading, the partner who has been listening summarizes the main ideas of the passage. After each section the partners switch roles.

REREADING - Rereading short passages, either silently or orally, sometimes clears up misunderstandings.

READING AHEAD - Information that clarifies a passage is frequently found by continuing to read.

BUILDING BACKGROUND KNOWLEDGE - The more the student reads on the topic the easier it gets for him/her to understand the material. Early in the research process the student may have difficulty comprehending material available on his/her topic. Rather than changing topics immediately, the student should continue reading because he/she is building background knowledge which aids comprehension.

Chapter 5

Apply

What it is

In the **Apply** step, students present the information in an appropriate manner. More specifically, the students:

- 4.1 **ORGANIZE INFORMATION FOR APPLICATIONS**
Depending upon the type of presentation, the student will organize the information appropriately.
- 4.2 **APPLY INFORMATION FOR INTENDED PURPOSE**
The student will present the information in the manner selected, utilizing the appropriate skills.

Strategies and Methods

Students learn to organize and communicate the information they have found. Quite often the format for communicating is chosen before the search begins. The format for application may guide the manner in which information is gathered. Students should be encouraged to try new formats. (See Appendix D.)

- * **Organizing information** - Students need to be provided models for helping them organize information for their presentation. (See the techniques described under presearch.)

Students need to:

- 1) Arrange information in a systematic way.
- 2) Delete unnecessary information.
- 3) Match organization to presentation format.

* **Presenting information**

- 1) Choose format - oral, written, or visual for presentation.
- 2) Learn what resources are available to help put the presentation together.
- 3) Watch teacher demonstration of presentation method or see teacher model of the format.

- * **Peer Edit** - Students work in teams of two and constructively critique the presentation of each other. They work with a student with whom they are comfortable. Students use a peer response form and share suggestions with their peers. (See Appendix D.)

Instruction is provided in class on how to help their peers produce a better product. Students are graded on their peer edit -- how well they read and commented on the other student's work.

* **Revision**

After the first draft of the presentation has been developed, allow the students one or two days of "rest" away from their work. This way their minds will be fresher for the revision process.

There are five elements to the revision process:

1. Enlarge Look for places where another paragraph or visual would improve the presentation.
2. Elaborate Look for places where more detail should be added.
3. Rearrange Check the order of the concepts in the presentation.
4. Refine Does the presentation flow? Would different words/visuals work better?
5. Cut Take out those items that don't work.

(Hirsch, 127-132)

Tips

Evaluate / Assessment

What it is

In the **Evaluate Step**, students evaluate whether the search plan which he/she developed was successful. The student realizes that not only is the end product important but that the process of creating the product is also important.

Strategies and Methods

During this step, students engage in activities which cause them to look at both their search strategy as well as their final product. The following provides some approaches to use.

- * Students **grade the teacher**. At the beginning of the unit, the teacher tells the students what he/she expects the students to learn. The students are told that they will evaluate how well the teacher does in teaching the concepts. Students do so with an in-class essay. (See sample in Appendix D.)
- * **Learning logs** - the student keeps a log of the process, jotting down how each step was done, problems encountered and makes observations. At the end, the student may comment on the effectiveness of the process.
- * **I-Search Paper** - Ken Macrarie, in his book The I-Search Paper, explains the process he named "I-Search." Emphasizing the process more than the end-product, an I-search paper describes the student's search for information and details the pathways taken to the information. Recommended for secondary school students.
- * **Student self evaluation** - The student reflects about how well his/her research strategy worked and conducts a self-evaluation. The evaluation may be an in-class essay, a check list or a rating scale.

- * **Peer evaluation** - Students assist other students by evaluating their work.
- * **"Processfolio"** - Students can create a portfolio that clearly depicts each part of the process. The "processfolio" can contain such things as their concept web, brainstorming notes, search plan sheet, note cards, story board, outline, rough draft of product as well as the final product.

Curriculum Connection

Critical thinking

Critical thinking skills are necessary for conducting thoughtful research. The Research Process developed by the Eau Claire Area Schools is a thinking process tightly bound to the curriculum which requires students to seek, find, analyze, assimilate, and communicate new information.

The research process is characterized by questioning, thinking, writing, planning, producing, and revising. According to Barbara K. Stripling and Judy M. Pitts in their book, Brainstorms and Blueprints, students will be more successful in the research process if these skills can be practiced in the classroom setting and can be incorporated into curricular units for any subject area. Questioning and thinking are described below. Writing, planning, producing and revising are described in the previous chapters.

Questioning

Stripling and Pitts suggest that assigning the questioning role to students can elevate the level of student thinking. Following the reading or viewing of classroom materials, students can be asked to formulate questions. The questions can range from simple review to ones that will elicit thoughtful discussion. The questions may involve speculation and therefore students will not know the answers to their questions.

According to Arthur L. Costa in his book, The School As A Home For The Mind, the types of questions asked should change and become more specific and profound. For example, students should ask for data to support others' conclusions and assumptions - using such questions as "What evidence do you have?" or "How do you know that's true?" The "if" or hypothetical question supports the critical thinking skills necessary to formulate research process questions: "What do you think would happen if?" or "If that is true, then what might happen if?"

In his book, Critical Thinking, Richard Paul, defines socratic questioning as a mode of questioning that deeply probes the meaning, justification, or logical strength of a claim, position, or line of reasoning. The Research Process requires students to formulate questions related to their topic and leads teachers into the perfect opportunity to teach questioning skills to students.

In the book, Developing Minds, Costa offers eight suggestions for teachers to improve student thinking:

1. Ensure that students process information.
2. Ask broad questions.
3. Wait before calling on students.
4. Follow up student responses by asking for: clarification, elaboration, evidence, thinking process.
5. Have a clear purpose, plan a sequence of activities to accomplish it.
6. Make students conscious of their own thinking processes.
7. Model problem solving and other thinking processes.
8. Have students ask questions of their own.

Thinking

In Developing Minds, Costa defines thinking as the mental manipulation of sensory input to formulate thoughts, reason about, or judge. According to Richard Paul, the perfections of thought include clarity, precision, specificity, accuracy, relevance, consistency, logicalness, depth, completeness, significance, fairness, and adequacy. Paul states, these perfections are general canons for thought. The Research Process can be a catalyst for exploring the perfections of thought with students.

Stripling and Pitts suggest students need practice in critical thinking. They include the following strategies as ways to practice critical thinking in an effort to help students with the research process: (1) taking notes from lectures, audiovisual programs, or written materials to provide experience in recognizing main idea, and supporting details, the notetaking cycle involves the student in questioning, analyzing, and evaluating the information in the sources, (2) using classroom reading assignments to help students practice forming opinions and supporting ideas with evidence, (3) recognizing relationships among items of information, (4) determining the accuracy of the facts by comparing sources, (5) recognizing statements that are facts and those that are opinions or value claims, (6) distinguishing bias from reason.

Writing process

The writing process parallels The Research Process in many ways. (See figure 1) The stages of prewriting and pre-searching go hand in hand. As students begin the research process, they formulate a question, relate what they wish to find with what they already know, brainstorm ideas, and organize their thoughts and ideas through planning.

Figure 1

The Writing Process	The Research Process
Prewrite	Presearch
Draft	Search
Revise	Interpret
Edit	Apply
Evaluate	Evaluate

Writers go through many of these same processes as they begin to write. They think of a possible topic, consider what they already know, and brainstorm ideas. Often writers organize by outlining or mapping before they actually write.

After the pre-searching step, researchers begin their search and their interpretation of information. Writers draft and revise as they reread and analyze what they have written.

Researchers, in the next stage of the researching process, apply their information by presenting it in some form. Writers edit and publish their work according to purpose and audience.

Evaluation is a formative stage of the researching and writing process. In other words, evaluation takes place throughout the research process as researchers revise questions, key words, and ideas as well as interpretation of information. Likewise, writers evaluate writing topics and revise as they write to make meaning clear for their intended audience.

Students who know the researching process can transfer this learning to the writing process. In the same way, knowing the writing process will help students become better researchers.

Connie Russell

Cooperative Learning

Cooperative learning techniques work well in many parts of The Research Process. Examples are given throughout the guide.

Courtesy of the English Department of John Barlow High School in West Redding, Connecticut, the following is an example of a cooperative research paper:

A. Presearch

The team selects a topic/thesis statement and develops a search strategy together. To help check the team's thesis and subtopics, the class does a team shuffle.

1. Each team member will be assigned to a different partner of another group.
2. Each student will "teach" the other their team's thesis and subtopics and be able to identify such to the teacher.
3. A grade will be determined by the teacher based upon how clearly the thesis is identified by each student.

B. Search

Each team member must know how to locate information from and within each source using key words.

The topic is broken into subtopics. Each subtopic is assigned to one team member to research. Each member develops notecards for each source used.

Each team member must be able to summarize each subtopic they are assigned to.

Each team member will be graded on the quantity, quality, and format of notecards.

C. Interpret

Each team member will explain to one another the research completed for each subtopic.

Each team member will be able to identify the "focus" of each other's research.

Each team member will be able to present a summary of each other's research to the teacher for a grade.

D. Apply

The team will list the subtopics from their paper. The team will develop a logical order for the subtopics.

The team must prepare a topic outline. The outline must be agreed to and signed by both students before being submitted for a grade.

The team should write the paper using the outline as the guide.

The team must write the paper together, never alone.

One student will type while the other will facilitate. The students will change roles each sitting.

E. Evaluate

1. Peer evaluation

Two copies of each paper will be printed and exchanged with another team.

Each student will proof a paper they are not familiar with.

The paper should be proofed for spelling errors, poor sentence construction, punctuation, and for a clarity of ideas.

The papers will be returned to the appropriate team members and a conference will be held to discuss the proofreading.

2. Teacher evaluation

The teacher will grade the paper and assign one grade.

Chapter 8

Resources

Appendix A

Glossary of Terms

Appendix B

Sample:
Research Guide for Students

Research Guide for Students (Sample)

Appendix C

The Research Process Chart

Appendix C

INFORMATION SKILLS CURRICULUM MEDIA SERVICES DEPARTMENT • EAU CLAIRE AREA SCHOOL DISTRICT EAU CLAIRE, WISCONSIN

MISSION STATEMENT

The free acquisition and application of information are fundamental to the development of the individual in a democratic society. Providing all students with the opportunity to become effective users of information is the primary goal of this curriculum. As a result of this instruction, students will approach every information problem with a systematic strategy and will think critically in finding, using, and evaluating information.

To be truly effective, the information skills curriculum must be integrated into the curriculum and taught in conjunction with other skills. Through the cooperation and commitment of administrators, teachers, media specialists and parents working toward this goal, district media centers will become extensions of the classroom.

LEARNER EXPECTATIONS

1.0 PRE-SEARCH

The student will have the skills to prepare for the search of information.

1.1 FORMULATE THE CENTRAL QUESTION

The student will be able to narrow the topic to be searched and to put it into the form of a question to be answered.

1.2 RELATE QUESTION TO PRIOR KNOWLEDGE

The student will make use of prior knowledge and information and relate it to the central question.

1.3 IDENTIFY KEY WORDS AND NAMES

The student will locate key words and names which will assist in locating information relative to the central question.

1.4 INTEGRATE CONCEPTS (BRAINSTORMING)

The student will organize the key words, noting relationships and concepts developed.

1.5 DEVELOP QUESTIONS TO ORGANIZE SEARCH

The student will develop a plan of how/where to search for answers to the central question.

1.6 REVIEW/RE-EVALUATE SOURCES

If needed, the student will revise and redefine the central questions based upon resources available.

2.0 SEARCH

The student is able to locate and use appropriate resources of information.

2.1 LOCATE SOURCES OF INFORMATION

The student knows what resources are available and can locate them.

2.2 SEARCH FOR RELEVANT INFORMATION

The student can successfully access the information once the resource has been located.

3.0 INTERPRET

The student will evaluate and select information from the resources found.

3.1 SELECT AND EVALUATE INFORMATION

The student will screen the information and select what is most relevant to answering the central question.

3.2 INTERPRET, INFER, ANALYZE AND PARAPHRASE

The student will read for understanding and develop the answer to the central question.

4.0 APPLY

The student will present the information in an appropriate manner.

4.1 ORGANIZE INFORMATION FOR APPLICATIONS

Depending upon the type of presentation, the student will organize the information.

4.2 APPLY INFORMATION FOR INTENDED PURPOSE

The student will present the information in the manner selected, utilizing the appropriate skills.

5.0 EVALUATE (THE PROCESS)

The student will evaluate whether the search plan which he/she had developed resulted in a successful resolution of the central question.

Credits: This curriculum is adapted from the INFORMATION SKILLS CURRICULUM GUIDE-- State of Washington, Department of Public Instruction, with permission. Another guiding source was CURRICULUM INITIATIVE: AN AGENDA AND STRATEGY FOR LIBRARY MEDIA PROGRAMS, Michael B. Eisenberg and Robert E. Berkowitz.

Appendix D

Teaching Forms

K - 5

**Learning
Activities**

Revised 12/98

INFORMATION SKILLS CURRICULUM
EAU CLAIRE AREA SCHOOL DISTRICT

****DRAFT****

9/92

MISSION STATEMENT

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To be truly effective, the information skills curriculum must be integrated into the curriculum and taught in conjunction with other skills. Through the cooperation and commitment of administrators, teachers, media specialists and parents working toward this goal, district media centers will become extensions of the classroom.

LEARNER EXPECTATIONS

1.0 PRESEARCH

The student will have the skills to prepare for the search of information.

1.1 FORMULATE THE CENTRAL QUESTION

The students will be able to narrow the topic to be searched and to put it into the form of a question to be answered.

1.2 RELATE QUESTION TO PRIOR KNOWLEDGE

The student will make use of prior knowledge and information and relate it to the central question.

1.3 IDENTIFY KEY WORDS AND NAMES

The student will locate key words and names which will assist in locating information relative to the central question.

1.4 INTEGRATE CONCEPTS (BRAINSTORMING)

The student will organize the key words, noting relationships and concepts developed.

1.5 DEVELOP QUESTIONS TO ORGANIZE SEARCH

The student will develop a plan of how/where to search for answers to the central question.

Course Title: Procedures and Care of Materials

Subject: Media Skills

Full Year or Semester: _____

Date: _____

New Course or Revision: _____

Grade Level: K

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
2.0	Know Your Library	Recognize and use library media center procedures	Students will: 1. Check out and return books. 2. Correctly replace books to their proper location on shelf. 3. Correctly follow check-out procedure established at the school.	Letter Mr. Wiggle (tagboard teaching aid) Book care bookmark Sample book card Book care posters	Teacher observation	

Course Title: Caldecott

Subject: Media Skills

Full Year or Semester: _____

Date: _____

New Course or Revision: _____

Grade Level: K

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
5.0	Appreciate Literature	To be aware that some books are Caldecott Award Winners.	Choose appropriate Caldecott winners to share with children. See #3 on Grade 2.	<u>Drummer Hoff</u> <u>May I Bring A Friend</u> <u>One Fine Day</u> <u>Snowy Day</u> <u>Make Way For Duckling</u> <u>Where the Wild Things Are</u> <u>Caldecott Winners</u> Polar Express (VID) 90344		See IMC catalog Dymix

Course Title: Check-out Procedures and Care of Material

Subject: Media Skills

Full Year or Semester: _____

Date: _____

New Course or Revision: _____

Grade Level: 1

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
2.0	Know Your Library	Recognize and use library media center procedures.	Students will: 1. Check out and return books. 2. Correctly check out material.	Bulletin board "Meet Mr. Library Manuvers" from "Adventures in Library Land" (update this) Examples of damaged books	Teacher observation	

Course Title: Caldecott

Subject: Media Skills

Full Year or Semester: _____

Date: _____

New Course or Revision: _____

Grade Level: 1

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
5.0	Appreciate Literature	<ol style="list-style-type: none">1. To be aware that some books are Caldecott winners.2. Identify different types of illustrations.3. Review role of author and illustrator of a book. <p>Locate fiction by author's last name. Locate non-fiction by subject. Introduce Kids Catalog. (optional)</p>	<ol style="list-style-type: none">1. Same as Kindergarten2. Discuss and show examples of: <u>Woodcuts - Once a Mouse Story a Story Collage - Snowy Day Watercolor - Song and Dance Man</u>3. See #3 on 2nd grade.	Art packet supply Pat Binder Check Dynix for up-to-date list of resources.		

Course Title: Check-out Procedures and Care of Material
 Subject: Media Skills
 Full Year or Semester: _____

Date: _____
 New Course or Revision: _____
 Grade Level: 2

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
2.0	Know Your Library	Recognize and use library media center procedures.	Book care activities	2nd Grade Book Care Unit	Teacher observation	

Course Title: Fiction
 Subject: Media Skills
 Full Year or Semester: _____

Date: _____
 New Course or Revision: _____
 Grade Level: 2

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
5.0	Appreciate Literature	<p>To understand the creation of a work of literature.</p> <p>Locating books by given authors.</p>	<p>Explain making of a book from idea through finished product.</p> <p>1) Locate author, title, call letters of fiction book.</p> <p>2) Alphabetize fiction books.</p>	<p>1) "The Making of a Picture Book" - Martin (Dinosaur in the Park)</p> <p>2) "How a Picture Book Is Made" - filmstrip - Steven Kellogg (Island of the Skog)</p> <p>3) Have students make idea file for writing books</p> <p>4) Books on making books</p> <p>Transparencies and worksheet</p> <p>+ + minibook shelves</p> <p>+ + fiction book covers</p> <p>Add "c" for Everybody</p> <p>Books by given authors, children favorite books, new books</p> <p>Use Kids Catalog</p>	Teacher observation	

Course Title: Computing

Subject: Media Skills

Full Year or Semester: _____

Date: _____

New Course or Revision: _____

Grade Level: 2

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
4.0	Apply Information	Recognize components of the computer station. TO BE REVISED	<p>"What is a Computer" sheet (#5) done as a group.</p> <p>"Computer Words" done as a group.</p> <p>Students will discuss care and cautions of computer hardware and software - use "Do's and Don'ts" sheet.</p> <p>Turn on and turn off steps.</p> <p>"Computer Keyboard" sheet (#9).</p> <p>Students fill in sheet starting at left with #1 - copying from large sheet.</p> <p>Students will keep keyboard at desk - may type name, address, spelling words, etc. to familiarize self with letter placement.</p>	Booklet Large poster of keyboard Software	Complete literacy quiz Operate computer without assistance	

Course Title: Procedures and Location of Material

Subject: Media Skills

Full Year or Semester: _____

Date: _____

New Course or Revision: _____

Grade Level: 3

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
2.0	Know Your Library	Recognize and use library media center procedures. Location of Media Center materials. Care of materials.	Students will: Review procedures as needed. Tour of Media Center.		Teacher observation	

Course Title: Fiction

Subject: Media Skills

Full Year or Semester: _____

Date: _____

New Course or Revision: _____

Grade Level: 3

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
2.0	Literature Appreciation	Student will be able to select a fiction book at their independent reading level.	Book talks on transitional books, series books, mysteries, new books, etc. Explain 5-finger rule. Students will: 1. Explain how fiction is arranged and identify call letters and their purpose. 2. Locate fiction books using the book's cover. Optional: 3. Identify the 3 cards in the card catalog. 4. Practice using card catalog to locate fiction books given an author's name or a title.	Teacher/media specialist will: See attached breakdown of days and activities. 1. Transparencies 1-8 2. Worksheets of Transparency #4 for students 3. "Mini" book shelves 4. Fiction book covers 5. Authors and titles written on cards See optional literature skills units for 3rd grade Use Kids Catalog	Teacher observation	

Course Title: Indexes - Print and Non-print

Subject: Media Skills

Full Year or Semester: _____

Date: _____

New Course or Revision: _____

Grade Level: 2.3.4

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
1.0	Presearch Skills	Identify key words and phrases.		Card Catalog Unit Demonstrate an electronic card catalog Self-developed WI resource-based unit	Test Teacher observation Completed card catalog packet	
2.0	Search for Information	Recognize that library materials are indexed, and that this index may be in a variety of forms (card catalog, microfiche, m on-line computer, etc.). Recognize that all indexes (card catalog, Reader's Guide, ERIC, etc.) are in alphabetical order. Identify author, title, and subject entries. Locate basic essential information on any given index entry. Use subject headings and cross reference to find additional resources.	Locate library subject headings. Record bibliographic information on catalog card. Locate books using the call letter or number. Locate resources using cross reference cards.	Kids Catalog Magazine Indexes		

Course Title: Wisconsin Reference Tools

Subject: Media Skills

Full Year or Semester: _____

Date: _____

New Course or Revision: _____

Grade Level: 4

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
1.0	Presearch Skills	Identify key words and phrases. Skim material for major ideas. Express ideas in simple sentence. Ask questions to clarify meaning. Reconsider general resource materials.	Answer questions using guided question sheets.	Wisconsin reference unit Two crossword puzzles Discuss Wisconsin authors and books written about Wisconsin Badger History Book Correlates with WI literature unit	Complete WI packet Complete crossword puzzles	
2.0	Search for Information (See Gr. 4 unit in S.S.)	Use subject headings and cross references. Locate sections of resources helpful in answering questions. Evaluate for currency of information. Interpret, analyze and paraphrase graphics - maps, animals, charts. Summarize important facts	Locate reference answers using keywords/descriptors. Locate books on Wisconsin. Locate books written by Wisconsin authors.			

Date: _____
 New Course or Revision: _____
 Grade Level: 5

Course Title: Electronic Searching
 Subject: Media Skills
 Full Year or Semester: _____

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
2.0	Search for Information	<p>Locate major headings.</p> <p>Skim for major ideas.</p> <p>Recognize and use library media center resources.</p> <p>Recognize library materials are indexed.</p> <p>Recognize indexes are in alphabetical order.</p> <p>Locate the sections of the resources that are useful in answering the search questions.</p> <p>Understand the concept of a database.</p> <p>Select information that is most useful in meeting the needs of the central question.</p> <p>Eliminate irrelevant information.</p> <p>Design the search strategy, narrowing the search parameters as needed, using truncation if necessary.</p> <p>Determine if additional resources are needed to fill gaps.</p> <p>Verify authenticity of information.</p>	<p>Record the answer to the reference.</p> <p>Record bibliographic information.</p> <p>Use an electronic database program to answer reference questions.</p>	<p>Bibliographic information sheet (Bibliographic Format)</p> <p>Research Process Guide for Teachers pages on Boolean Searching and Truncation</p> <p>Karen Schrock, <i>Evaluating Internet Web Sites</i> book</p>	<p>Complete bibliography</p> <p>Complete web evaluation form</p>	

Course Title: Newbery

Subject: Media Skills

Full Year or Semester: _____

Date: _____

New Course or Revision: _____

Grade Level: 5

WIS STRD NUMBER	LEARNER EXPECTATIONS	OBJECTIVES	SEQUENTIAL LEARNING ACTIVITIES	RESOURCES	EVALUATION	TEACHER NOTES
5.0	Appreciate Literature	Become familiar with various Newbery books and authors.	<ol style="list-style-type: none">1. Read Newbery book(s).2. Videotape commercials on Newbery winners.3. Write letters to authors.4. AV materials on books and authors (see IMC catalog).5. Students create awards.	Check district union catalog for resources Newbery packet Newbery bookmark Honor book list Use Kids Catalog to locate more information on Newbery books Websites URL ☐ http://www.ala.org/aisc/newbery.html	Summarize a Newbery book/evaluate worth of the book as an award winner	



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COPY

September 23, 1998

TO: K-12 Media Specialists, Technology Specialists

FROM: Linda Stelter, Media Coordinator

RE: Media Services Initiatives and Staff Development Needs for the 1998-1999
School Year

Thank you for your participation in the Affinity Process at our first meeting on September 21, 1998. Our group did an excellent job of brainstorming and grouping ideas. This activity gives us a solid framework to use in planning this year's activities. I really appreciate your participation.

The next step is to review the Affinity Diagram representing your groupings and ideas. Please consider the importance of each grouping to you. Then, rank the groupings accordingly, with 7 being high and 1 being low. Next, consider the ideas within each group. Rank the ideas within each group. This will help us in planning our approach to accomplish these goals.

The Affinity Process can be an ongoing process. If you think of an idea that is not represented, please add it below or email me at any time:

Ideas:

I'm interested in establishing a team of media specialists to work with me in planning this year's activities based on the feedback from the Affinity Diagram. Please indicate below if you are interested:

Yes, I'm interested in participating on a team to plan Media Activities for 1998-1999.

We will need several sites to hold activities. Please indicate below if you are willing to host meetings or inservice training:

Yes, I'm willing to host a meeting or training at my school.

PLEASE RETURN BY MONDAY, SEPTEMBER 28, 1998

c: Laurie Hittman

**Media Services Initiatives and Staff Development Needs
for the 1998-1999 School Year**

Rank the Groupings (7 is high, 1 is low)	Ideas	Rank the Ideas Within Each Group
<input type="checkbox"/> Curriculum and Standards	1) Training on Information Technology Standards	1) <input type="checkbox"/>
	2) Develop a uniform curriculum guide for each grade level - Literature/New Computer Skills	2) <input type="checkbox"/>
	3) Sharing Curriculum Ideas	3) <input type="checkbox"/>
	4) Design learning packets for staff on Electronic Resources	4) <input type="checkbox"/>
	5) Revisit Internet Acceptable Use Policy	5) <input type="checkbox"/>
<input type="checkbox"/> Leadership Issues	1) Referendum help for passage - What role should we play?	Rank the Ideas within Leadership Issues (3 is high, 1 is low) 1) <input type="checkbox"/>
	2) Identify strategies to communicate <u>technology plan</u> to parents & staff	2) <input type="checkbox"/>
	3) Foster communication between teachers, media people, administrators, parents, students, etc.	3) <input type="checkbox"/>

Rank the Groupings (7 is high, 1 is low)	Ideas	Rank the Ideas Within Each Group
<input type="checkbox"/> Dynix Training	1) Dynix codes and what they do	Rank the Ideas within Dynix Training (8 is high, 1 is low) 1) <input type="checkbox"/>
	2) Review District Interlibrary Loan procedures	2) <input type="checkbox"/>
	3) Dynix - Reports	3) <input type="checkbox"/>
	4) Training on Holds	4) <input type="checkbox"/>
	5) Kid's Catalog	5) <input type="checkbox"/>
	6) New Kid's Catalog installation instructions	6) <input type="checkbox"/>
	7) Kid's Catalog Searching Techniques	7) <input type="checkbox"/>
	8) Get Kid's Catalog up and running in all schools	8) <input type="checkbox"/>
<input type="checkbox"/> Contract Issues	1) Discuss pay given for aides & media personnel for inventory times prior to school starting and when school is out	Rank the Ideas within Contract Issues (2 is high, 1 is low) 1) <input type="checkbox"/>
	2) Aides and media staff - 1 week after school - 1 week before	2) <input type="checkbox"/>

Rank the Groupings (7 is high, 1 is low)	Ideas	Rank the Ideas Within Each Group
<input type="checkbox"/> Equipment Inservice & Support	1) Troubleshooting equipment	1) <input type="checkbox"/>
	2) Digicard Maintenance and Troubleshooting	2) <input type="checkbox"/>
	3) Equipment cleaning on regular basis	3) <input type="checkbox"/>
	4) Need someone to come out and handle major computer problems	4) <input type="checkbox"/>
	5) Equipment purchase ideas (AV & computer)	5) <input type="checkbox"/>
	6) Need guidelines for equipment purchase - what model, etc., repair record, etc.	6) <input type="checkbox"/>
	7) Address staff development for networking/servers, etc.	7) <input type="checkbox"/>
	8) Quick guides for various computer procedures	8) <input type="checkbox"/>
	9) Inservice on setting up computers and printers to network	9) <input type="checkbox"/>
	10) Planned strategies on securing computer donations from business and personal homes	10) <input type="checkbox"/>

Rank the Groupings (7 is high, 1 is low)	Ideas	Rank the Ideas Within Each Group
<input type="checkbox"/> Internet email & Inservice Training	1) Internet training for email communication and sending attachments	Rank the Ideas within Internet email & Inservice Training (16 is high, 1 is low). 1) <input type="checkbox"/>
	2) Need to find a way to set up email addresses on computers with multiple users	2) <input type="checkbox"/>
	3) Establish an email directory on District Website	3) <input type="checkbox"/>
	4) Get everyone on real email	4) <input type="checkbox"/>
	5) Revisit communication between media personnel	5) <input type="checkbox"/>
	6) Distribution list on internet email	6) <input type="checkbox"/>
	7) Create a system (electronic) for sharing units & other information (e.g. good web addresses)	7) <input type="checkbox"/>
	8) Technical support	8) <input type="checkbox"/>
	9) Identify technology support priorities	9) <input type="checkbox"/>
	10) Help Lines	10) <input type="checkbox"/>
	11) Improve communication between schools and central office technology people	11) <input type="checkbox"/>

Rank the Groupings (7 is high, 1 is low)	Ideas	Rank the Ideas Within Each Group
Internet email & Inservice Training (continued)	12) Finish network wiring in buildings 13) Set up all computers with memory, network cards and Netscape 14) Develop a calendar for tech person (like Ken or Bob Scidmore) to come to schools on regular (announced) visits - so I can be prepared 15) Find an expert on NT servers - pick their brain!! 16) Directory for Technical Support	12) <input type="checkbox"/> 13) <input type="checkbox"/> 14) <input type="checkbox"/> 15) <input type="checkbox"/> 16) <input type="checkbox"/>
<input type="checkbox"/> Internet Resources & Computer Software Inservices	1) Inservice start time 4:00 not 3:00 2) Inservice on Windows 95 3) Internet searching techniques 4) Training for WebPac access 5) Training for Badgerlink	Rank the Ideas within Internet Resources & Computer Software Inservices (17 is high, 1 is low) 1) <input type="checkbox"/> 2) <input type="checkbox"/> 3) <input type="checkbox"/> 4) <input type="checkbox"/> 5) <input type="checkbox"/>

Rank the Groupings (7 is high, 1 is low)	Ideas	Rank the Ideas Within Each Group
Internet Resources & Computer Software Inservices (continued)	6) Internet Issues - e.g. IFLS had a great session on this issue	6) <input type="checkbox"/>
	7) Implement staff development to take advantage of online resources (advertise/market?)	7) <input type="checkbox"/>
	8) Image Processing	8) <input type="checkbox"/>
	9) Presentation	9) <input type="checkbox"/>
	10) Multimedia	10) <input type="checkbox"/>
	11) Spreadsheets and use with budgets	11) <input type="checkbox"/>
	12) Database	12) <input type="checkbox"/>
	13) Graphic Design	13) <input type="checkbox"/>
	14) Desktop Publishing	14) <input type="checkbox"/>
	15) File Management	15) <input type="checkbox"/>
	16) Looking up a list of acronyms	16) <input type="checkbox"/>
	17) Link Eau Claire Public Library on ECASD web page	17) <input type="checkbox"/>