Quo Vadis: An Integrated Direction for Catholic Media Technology Engagement

Eugene M. Gan

Follow this and additional works at: https://dsc.duq.edu/etd

Recommended Citation

This Immediate Access is brought to you for free and open access by Duquesne Scholarship Collection. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of Duquesne Scholarship Collection.
QUO VADIS:
AN INTEGRATED DIRECTION FOR CATHOLIC MEDIA TECHNOLOGY ENGAGEMENT

by

Eugene Gan

Submitted in partial fulfillment of
The requirements for the degree
Doctor of Education

Instructional Technology Program
School of Education
Duquesne University

February 2006
DUQUESNE UNIVERSITY
SCHOOL OF EDUCATION

Dissertation

Submitted in Partial Fulfillment of the Requirements
For the Degree of Doctor of Education (Ed.D.)
EdDIT Doctoral Program

Presented by:

EUGENE GAN
M.S., Duquesne University, 2001
B.S., Carnegie Mellon University, 1994

February 14, 2006

QUO VADIS:
AN INTEGRATED DIRECTION FOR CATHOLIC MEDIA TECHNOLOGY
ENGAGEMENT

Approved by:

__________________________, Chair
Gary D. Shank, Ph.D.
Professor, Department of Foundations and Leadership
Duquesne University

__________________________, Member
David Carbonara, EdD.
Asst. Professor, Program Director, Instructional Technology
Duquesne University

__________________________, Member
Douglas Lowry, Ph.D.
Professor, Business and Marketing (ret.)
Franciscan University of Steubenville
Copyright and by

Eugene Gan

2006
Abstract

Over the years, the Catholic Church has explored issues of media technology and how it relates to education. At the same time, a number of profound, modern Catholic thinkers have wrestled with the nature of media technology and how it affects the human condition. These two threads have been independent of each other. An effective conceptual understanding of the role and meaning of media technology in Catholic education requires us to weave these two threads together to craft an integrated and coherent synthesis. The question I raise is: in a culture that promulgates the digital lifestyle as the standard and norm, is there a proper way for Catholics to engage media technology? And because education forms the foundation with which we transmit our values, heritage, and worldview, we ask the attendant question of how Catholics should integrate media technology in their education? Directed at Catholics, and particularly educators, administrators, policymakers, parents, communicators, as well as creators and recipients of media technologies, this dissertation proposes seven foundational policies or keys for effective media technology engagement. These keys are in turn grounded on fundamental precepts found in scripture, magisterial documents on social communications or education, as well as discerningly mined from a wide range of other sources that offer wisdom about education and/or media technology. A prototype for an instructional technology lesson that is naturally derived from these keys is the logical next step, and is proffered in anticipation that it may be adapted to various lesson plans, home schooling activities, as well as courses in other subject areas that have with them a goal to integrate media technologies. We are at a point in multimedia learning and
educational technology where practical explorations can greatly help chart the direction, 
type, and methods of instruction. This exploration set at the intersection of Catholic 
education and media technology is a first step on the journey toward empowering 
Catholic institutions, parents, and educators to engage media technologies in a practical 
way while at the same time upholding and actively living the Catholic identity and 
Abstract
QUO VADIS: AN INTEGRATED DIRECTION FOR CATHOLIC MEDIA TECHNOLOGY ENGAGEMENT
Eugene Gan
Doctor of Education; February 2006
Duquesne University
Chair: Dr Gary Shank

Over the years, the Catholic Church has explored issues of media technology and how it relates to education. At the same time, a number of profound, modern Catholic thinkers have wrestled with the nature of media technology and how it affects the human condition. These two threads have been independent of each other. An effective conceptual understanding of the role and meaning of media technology in Catholic education requires us to weave these two threads together to craft an integrated and coherent synthesis. The question I raise is: in a culture that promulgates the digital lifestyle as the standard and norm, is there a proper way for Catholics to engage media technology? And because education forms the foundation with which we transmit our values, heritage, and worldview, we ask the attendant question of how Catholics should integrate media technology in their education? Directed at Catholics, and particularly educators, administrators, policymakers, parents, communicators, as well as creators and recipients of media technologies, this dissertation proposes seven foundational policies or keys for effective media technology engagement. These keys are in turn grounded on fundamental precepts found in scripture, magisterial documents on social communications or education, as well as discerningly mined from a wide range of other sources that offer wisdom about education and/or media technology. A prototype for an instructional technology lesson that is naturally derived from these keys is the logical
next step, and is proffered in anticipation that it may be adapted to various lesson plans, home schooling activities, as well as courses in other subject areas that have with them a goal to integrate media technologies. We are at a point in multimedia learning and educational technology where practical explorations can greatly help chart the direction, type, and methods of instruction. This exploration set at the intersection of Catholic education and media technology is a first step on the journey toward empowering Catholic institutions, parents, and educators to engage media technologies in a practical way while at the same time upholding and actively living the Catholic identity and philosophy of life (Ong, 1990, p. 347).
# TABLE OF CONTENTS

CHAPTER

CHAPTER I: INTRODUCTION ...........................................................................................................1

CHAPTER II: DERIVING THE SEVEN KEYS FRAMEWORK FOR MEDIA TECHNOLOGY ENGAGEMENT ........................................................................................................ 5

Can You Hear Me Now? ........................................................................................................... 5

The Real Question .................................................................................................................. 6

Quo Vadis? ............................................................................................................................. 8

A Definition and a Plan .......................................................................................................... 10

What a ‘Mess-age’ .................................................................................................................. 12

A New Hope ........................................................................................................................... 27

A Note on Practicality ............................................................................................................. 31

A Note on Virtuality and the Catholic Worldview ............................................................... 32

The Unconsidered Case of Sensory-Experiential Events (SEEs) ......................................... 36

Seeing SEEs in Journeying Through the Three Ages .......................................................... 37

Seeing SEEs in the Literature ............................................................................................... 41

Seven Keys to Catholic Media Technology Engagement ................................................... 47

CHAPTER III: TOWARD A CATECHESIS FOR USING MEDIA TECHNOLOGIES IN CATHOLIC EDUCATION ........................................................................... 74

Does This Conceptual Framework Improve Educational Practice In The Field of Instructional Technology? Does This Framework Improve The Delivery of Instructional Technology In Education? .................................................................................................................. 76

What Are Some Differences Between The Catholic and Secular Worldviews of Education?........................................................................................................................................... 78

Do You See A Difference Between Experiential Learning As Described In Many Contemporary Texts and The Sensory-Experiential Events (SEEs) You Described?.. 83

Do You See A Difference Between Contemporary Constructivist Learning Approaches and The Engagement of Media Technologies As Proposed By The Seven Keys? ...... 85

Do You See Constructs Like Bloom’s Taxonomy and Gardner’s Multiple Intelligences As Still Useful Within the Framework of The Seven Media Technology Engagement Keys?........................................................................................................................................... 90

Why Did You Begin This Journey? What Motivated You In The First Place? ........ 91

Why Seven Keys?................................................................................................................................................................................................. 95

Are These Keys Really Practical Throughout All Disciplines?......................... 96

Is There A Consequence To Not Adopting A Framework For Engaging Media Technologies? Where Are We Headed If We Do Not Adopt A Framework For Engaging Media Technologies?.......................................................................................................................... 97

CHAPTER IV: AN INSTRUCTIONAL TECHNOLOGY DESIGN PROTOTYPE, GROUNDED ON THE SEVEN KEYS FRAMEWORK DERIVED IN CHAPTER TWO, THAT INTEGRATES MEDIA TECHNOLOGY AND CATHOLIC EDUCATION .......................................................................................................................... 100
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction and Situating The Question</td>
<td>104</td>
</tr>
<tr>
<td>Needs Assessment</td>
<td>107</td>
</tr>
<tr>
<td>Problem Defined</td>
<td>109</td>
</tr>
<tr>
<td>The Stakeholders</td>
<td>109</td>
</tr>
<tr>
<td>Purpose</td>
<td>111</td>
</tr>
<tr>
<td>A Prototype Lesson</td>
<td>112</td>
</tr>
<tr>
<td>Next Steps</td>
<td>162</td>
</tr>
<tr>
<td>CHAPTER V: JOURNEYING FORWARD</td>
<td>164</td>
</tr>
<tr>
<td>What Other Paths Are Possible From Here On In The Journey? Where To Next? What Are Some Potential Possibilities For Using These Seven Keys?</td>
<td>166</td>
</tr>
<tr>
<td>References</td>
<td>176</td>
</tr>
<tr>
<td>Appendix A</td>
<td>209</td>
</tr>
<tr>
<td>Biographies of a Selection of Modern Catholic Thinkers</td>
<td>210</td>
</tr>
<tr>
<td>Appendix B</td>
<td>233</td>
</tr>
<tr>
<td>Descriptive Summaries of a Selection of Pertinent Catholic Church Documents</td>
<td>234</td>
</tr>
<tr>
<td>Appendix C</td>
<td>246</td>
</tr>
<tr>
<td>Towards a definition of “media technology in Catholic education”: A Handout for Students</td>
<td>247</td>
</tr>
</tbody>
</table>
LIST OF TABLES

TABLE

Table 1. Example guiding questions for the seven keys to Catholic media technology engagement .................................................................................................................. 129

Table 2. Task Inventory ........................................................................................................ 138

Table 3. Task/Objective/Criterion chart with corresponding cognitive domains .......... 140

Table 4. Features of the “Towards a definition of ‘media technology in Catholic education’” lesson .................................................................................................................. 149

Table 5. Rubric for creating a definition of media technology in Catholic education.... 152

Table 6. Sample reflection log/blog guiding questions .................................................. 155

Table 7. Sample formative evaluation indicators ......................................................... 156
LIST OF FIGURES

FIGURE

Figure 1. Overview of the main contributors to the seven keys framework..................... 50

Figure 2. Overview of larger inquiry – praxis logically entailed by the seven keys framework........................................................................................................ 106

Figure 3. Concept map of units and lesson objectives for “Towards a definition of ‘media technology in Catholic education”’ ................................................................. 137
CHAPTER I

INTRODUCTION

If you are an educator in a Catholic school, and you want to integrate media technology in your lessons, how would you begin to do so? Perhaps you would begin logically with thought and care, as any conscientious secular educator would, by researching various texts and journals that cover instructional design methods and that evaluate educational and instructional technologies. Or you might pull out your pre-service course notes to see what your teachers had talked about with regard to media technologies in education. Or you might ask peers for ideas and what has worked for them. Or you might choose to attend an instructional technology conference. Taking all these sources together, you would presumably find a wide range of educational technologies and instructional methods that demonstrate media technology integration in various lessons. Fair enough.

But what if you desire to bring a Catholic worldview to your media technology lesson integration? Does this change the way you perceive the studies you are researching? On reflection, you realize that adopting a Catholic worldview that is authentic to scripture, and therefore the precepts of the Catholic Church, not only directs your perception in a unique or even peculiar way (e.g., 1 Corinthians 1:18, 1 Corinthians 3:9, New American Bible), but also requires you to orient yourself towards certain ends (e.g., 2 Timothy 4:7, Hebrews 12:1, New American Bible). Ends that are not necessarily recognized, talked about, or studied in the broad and burgeoning field of educational technology (cf. Schultze, 2000, p. 85). Ends that include concepts such as ‘sin’, ‘Savior’,
and the responsibility to ensure that instructional technology is directed towards proclaiming God’s love. Ends that may not have been considered when the instructional philosophies that the methods are grounded on were drafted, and that if not considered, can potentially subvert the worldview of those who employ or undergo the instructional methods (cf. Allen, 2005, para. 8). This is not a concept unique to the Catholic faith as it is also found in secular thinking: on a simplistic level, instructional “designers are increasingly aware that they make products for people and with people and that, by their products, they may change people” (Visscher-Voerman & Gustafson, 2004, p. 84; see also Thomas, Mitchell, & Joseph, 2002).

Without a means, and I would add, a portable means to easily think about and approach media technology integration in Catholic education, how can a Catholic teacher who desires to follow the precepts of the Catholic Church select discerningly from the myriad methods presented in the instructional technology field? In other words, a framework for thinking about and approaching media technologies in Catholic education is necessary to evaluate instructional technology methods to ensure that any methods selected and employed in an authentic Catholic environment remain true to the precepts of the Catholic Church. Or put yet in another way, a framework that functions as an indicator-instrument, a barometer if you will, that is uniquely tailored to the specific needs of the Catholic culture and worldview is necessary if we are to improve Catholic educational practices in a media technology age. It would then also be a framework that creates a common language, which communities can adopt and which individuals can share.
With such a framework, and hopefully one that is portable enough to easily hold
in one’s mind and to apply in different circumstances, a Catholic educator can be
confident in assessing various instructional technology applications and methodologies
for possible inclusion in course planning and lesson adoption. With such a framework to
aid orientation, structure assessment, and guide processes, a Catholic educator can even
set out to create tailored lesson plans that exemplify instructional design, media
technology integration, and authentic Catholic teaching.

It has been lamented by some notable contemporary thinkers in the Catholic
Church that Catholics have in the past been less than energetic in adopting media
technologies as gifts from God (e.g., John Paul II, 1990b, para. 37; McLuhan, 1999, p.
91; Percy, 1991, p. 301). However, such a framework has the potential to propel Catholic
education in a media technology saturated world in ways that heretofore were hesitantly
approached or unduly rejected. This is because with a framework that is grounded on
scripture as well as magisterial documents that explicate the natures of education and of
media technology in social communications, it would essentially say confidently to
Catholic educators: “Come play with these tools and methods. They have been tested
against authentic Catholic teaching.” A framework firmly grounded on the precepts of the
Catholic Church would encourage free play, authentic liberty, and resourceful creativity
in crafting innovative Catholic media technology instruction. The implications could be
enormous as it could advance educational and instructional technology in Catholic
institutions – a concept that might seem incongruous and out of place at this period of
time. Yet, this is really an echo of an age-old call to Catholic educators to regroup and
carry the light of education that the Catholic Church has carried throughout the centuries: teaching, preserving and advancing knowledge in the early Christian schools and scriptoriums. Imagine: Catholic institutions, educators, and parents called to be instructional technology leaders, not cultural followers, or worse, dawdlers. Just as important in developing a usable structure and an integrated direction, I believe that this dissertation, in its effort to derive a framework for engaging media technology in Catholic education, both mediates the results of scholarly research in instructional technology to Catholics while, it is hoped, concurrently brings the Catholic worldview of education to instructional technology scholarly conversations. For if the reader also subscribes to the Catholic worldview that all human beings have been created in the image and likeness of God, and thus share a common humanity, then such a media technology engagement framework that is grounded on the Catholic worldview is applicable to all education whether it professes to be Catholic or not.

If this were a map, you would see an ‘X’ that marks where we are. *Quo vadis?* Where are you going? Where are Catholics headed with media technology engagement? How should Catholics orient themselves to instructional technology? We embark on our journey as we look categorically at instructional technology conversations and studies.
CHAPTER II
DERIVING THE SEVEN KEYS FRAMEWORK FOR MEDIA TECHNOLOGY ENGAGEMENT

Can You Hear Me Now?

Imagine that you are seated comfortably, ready to begin reading a dissertation about what appears to be media technology and its impact on Catholic education. Instead, you encounter the first line that reads: A preliminary quiz question so that you may assess your own media technology engagement (inspired by and with thankfulness to Percy, 1983). You humor the author and continue:

It is a beautiful sunset at the beach. And while all sunsets are magnificent, this one touches you in an inexplicable way. You sit on the warm, soft sand and watch the gulls fly across a crimson sky. The balmy breeze both invigorates and relaxes you. The sound of heavy waves rolling rhythmically and dispersing on the shore envelops your senses. Just then, a man and a woman, clearly a couple going out together, walk by. They each have a cellular phone in hand, cupped to their ears, and they are obviously chatting animatedly with separate people at the other ends of their individual lines. You feel

(a) jealous that you do not own a cellular phone or if you own one, that you do not have it with you here at the beach.

(b) triumphant that technology can be employed to keep in touch with anyone, anywhere, and at anytime.
(c) annoyed that they have, by their incessant chatter, just ruined what was the most perfect sunset that you have experienced to date.

(d) saddened by the way technology has been allowed to distract from the natural experiences and from being present to the moment and to others.

Explain your choice(s).

The Real Question

Roman Catholics are a peculiar people. They define themselves as being “in the world, but not of the world” (e.g., John 15:19, John 17:14, New American Bible). By their definition, they have a worldview that affects all aspects of life, not the least of which is education (Vatican II, 1965c). Accordingly, it is through education that the heritage, values, principles, and the philosophy of life are experienced and actively conveyed from generation to generation (Pontifical councils, 2000, para. 9; The Sacred Congregation for Catholic Education, 1977, para. 49). By their own definition, their worldview of the integration of media technology in Catholic education is different from a non-Catholic worldview. What exactly is this Catholic worldview of media technology integration in education? How should Catholics engage media technology? When I asked a mass media class of 40 students that I was teaching at Franciscan University of Steubenville, students had a difficult time in answering both related questions.

Roman Catholics have a further responsibility as priest-kings, “a kingdom of priests, a holy nation” (e.g., Exodus 19:6, New American Bible), of thus leading and calling their brothers and sisters – all other peoples – back to the family of God (Hahn, 1998, p. 146; Matthew 28:19, New American Bible). Perhaps my experience with
Catholic schools in the United States playing catch-up to and largely following secular schools in the domain of media technology integration resonates with your own experience? If not, I would certainly appreciate hearing about what Catholic schools are doing differently or how they are leading other schools in media technology applications (cf. Field, 2001; The Sacred Congregation for Catholic Education, 1977, para. 12).

Moreover, a portable solution is needed, that is, a framework that Catholics can easily use to apply to media technology engagement in a broad range of circumstances and environments; an anthropology and theology of communication is needed (Pontifical councils, 1992, para. 8; see also, Pontifical councils, 2002a, para. 9) that is directed toward education and training (Pontifical councils, 2002a, para. 7; see also John Paul II, 2005c, para. 11; Zenit, 2005a). It seems that we are either moored to the shore, afraid of setting out for fear that media technology moguls, the content of what we experience in the media, our own dependence on the technologies, and a host of other possible pitfalls in the process proves too intimidating, or else we are adrift on our journey in the media technology world without a proper sense of direction.

For the (hopefully few) readers who tend to read only the first and last sections of texts, skipping through the middle sections, I would like to present the underlying principle for media technology integration in education. It is extremely simple. The first step is to consider if the goal of the lesson is (a) to have a logical, lineal discussion, or (b) to give the students an experience of the subject. If it is the former, media technology may be a distraction. If it is the latter, then the goal of the lesson may be practically met with the integration of media technology. But what is ‘experience’? Is the above to imply
that a lesson must be one or the other – sequential or experiential? Is this just a rehash of
contemporary studies on constructivist-experiential learning, or learner-centered
educational ideas (for example, Anderson, 2004, p. 239; Appelman, 2005; Fosnot, 2005;
Kolb, 1984; Kolb, Boyatzis, & Mainemelis, 1999; Presidential task force on psychology
in education, 1993)? For the responses to these questions and more, that is what the
middle sections that follow are for.

Quo Vadis?

Even from non-scriptural and non-magisterial sources, we hear of a need for a
philosophy of media technology in education: “Education is…at its heart, people dealing
with people. That is why any successful reform must build upon a human philosophy that
makes clear its aims and objectives. Technology without a philosophy of education is
mechanical” (Elkind, 2004, p. 312). “Any innovation in our system of education,
including technology, raises persistent questions about the purposes of education”

The Church document Pastoral Instruction Aetatis Novae on Social
Communications (1992) affirms that “today, much that men and women know and think
about life, is conditioned by the media; to a considerable extent, human experience itself
is an experience of media” (Pontifical councils, 1992, para. 2). In a meeting with Catholic
bishops, Archbishop John Foley, the president of the Pontifical Council for Social
Communications, made clear that the “Internet is the Areopagus of our time, the
instrument to spread the Christian message” (as reported in Zenit, 2005b, para. 5). At the
same time, he stresses the need to educate in the use of the Internet because, “as with
every reality that surrounds us, the positive element is opposed to the negative, creating confusion and false values” (para. 5). He goes further to ask for “precise criteria of discernment and a pedagogical intention, so that both those who operate in the sector as well as those who use the network are able to choose with maturity in an ever broader context of information and disinformation” (para. 8). These precise criteria and pedagogical intentions are equally required of all media technologies (see for example John Paul II, 2005c, para. 3; Pontifical councils, 1992, para. 1). With currently no integrated and portable definition for Catholic media technology engagement, no unifying policy or defining role for media technology in Catholic education, then *quo vadis*? Where are we going and where are we headed? It is risky, even dangerous, to set out on a journey into an unknown without the aid of a compass, a flashlight, and a map. Similarly, it is foolhardy and imprudent for Catholics to be in a world that is saturated with media technologies to go about without an equivalent compass, flashlight, and map.

In this dissertation, I hope to supply Catholics, and in particular educators, administrators, policymakers, parents, communicators, as well as creators and recipients of media technologies with these aids.

In order to begin our journey, we need to have a direction to take. Policies for Catholic media technology engagement will be our compass and provide this direction. These policies are in turn grounded on, informed by, and illuminated by scripture, magisterial documents, and to an extent, a selection of texts and articles whose authors have sought to focus their thinking in similar directions, even if they might be in disparate and separate fields. We will thus have our flashlight. Our last item needed for
the journey is a map that comprises an instructional template that an educator can use for creating lessons and courses that employ the Catholic media technology engagement policies.

A Definition and a Plan

To accomplish the above, I have divided this dissertation into five chapters. Chapter one presented you with motivations that would warrant a framework for media technology integration in Catholic education. It functioned as an ‘X’ marking where we currently are so as to orient ourselves properly on the map. Chapter two begins the journey of deriving a framework through first explicating the need for an integrated direction and then proposes a conceptual framework of seven policies or keys for Catholics to adopt and build upon in media technology engagement. The plausibility and soundness of this integrated framework is grounded upon and derived as a logical construct of Catholic thought, from the Catholic Church’s explorations of issues of media technology and how it relates to education, and from a number of profound Catholic thinkers of modern vintage – John Paul II (2005c), Maritain (1943), McLuhan (1999), and Ong (1982), to name a few – who have grappled with the nature of media technology and how it affects the human condition. If we return to the definition of a catechism as a teaching that is presented in the form of questions and answers, then chapter three serves to orient the reader towards the seven keys framework through a series of guided inquiries and responses. Presented as frequently asked questions, chapter three revisits the seven keys, showing their potential and inviting the reader to continue a personal and communal journey in using and building upon this framework. With the framework set
up and a catechesis begun, chapter four presents a prototypical instructional technology
lesson plan that is logically and naturally derived from these seven keys. Lastly, chapter
five opens up the possibilities and potential applications for the seven keys, presenting a
sampling of different paths for the reader to take in continuing the journey of Catholic
media technology engagement.

A note about my use of the phrase ‘media technologies’ or its singular form,
‘media technology’: I chose these phrases to encompass all modes of media that use
technology in one form or another, and that are prevalent at this particular period in our
western (and even global media technology) culture. At this time, this definition would
include film, radio, TV, CDs, DVDs, videos, the Internet, computerized cell phones,
PDAs, as well as computer mediated entertainment, edutainment, and applications.

While this framework can be utilized by Catholics, and in particular teachers,
administrators, policymakers, parents, communicators, as well as creators and recipients
of media technologies, a special emphasis must be made towards those who will use
media technologies in Catholic education. The goal here is not so much to narrowly list
how to specifically create Catholic lessons that are integrated with media technologies,
but how to prepare and orient oneself to do that work. To try to speak only of how to
create such lesson types would be to try to limit the creative possibilities that Catholic
educators are encouraged to explore in their particular circumstances and settings. In a
way, it is like saying that it is not my goal to give you a paint by numbers canvas, but to
orient and inspire you with a worldview-vision that you can make your own.
Therefore, as you read, and especially with regard to the policies, I encourage you to reflect on your own engagement with media technologies. I hope for many of you the policies here will resonate with your experiences, and that you may find the inherent principles to be of practical use in daily life, for even the clearest evidence or analysis is not as convincing as your own encounters with media technology.

What a ‘Mess-age’

You have heard it before, but it is still probably an understatement to say that the past decade has seen a tremendous increase in the size and scope of the worldwide media technology industry, to say nothing of the 10 billion dollar multimedia entertainment market in the United States alone. Analysts at PricewaterhouseCoopers project the global video game industry revenue (revenues from hardware, software, and peripherals) to increase from $25.4 billion in 2004 to $55 billion in 2009 (BusinessWeek, 2005; see also Ulmer 2004), making it the fastest growing industry segment (PricewaterhouseCoopers, 2004, p.17). And these figures only cover a portion of the multimedia arena, failing to include established market segments such as interactive CDs, DVDs, instructional media, and online media. Their forecast states:

Broadband Internet access is growing rapidly, boosting overall access spending and creating new opportunities for online advertising while simultaneously propelling spending in other segments. Viable licensed digital music services began to affect the recorded music market in 2003 and will help the industry grow via these new revenue streams. People are playing video games online, renting movies online, and buying electronic books. Mobile phones are also emerging as
a distribution channel for entertainment and media. Wireless video games are growing explosively, and wireless phones are being used for accessing the Internet, for downloading music, and for getting sports results and game highlights. Even consumer books are being distributed to wireless devices. These distribution channels will become significant during the next five years (p. 7). We project the entertainment and media industry in the United States; Europe, the Middle East, and Africa (EMEA); Asia/Pacific; Latin America; and Canada will increase from $1.2 trillion in 2003 to $1.7 trillion in 2008, growing at a compound annual rate of 6.3 percent. (p. 11)

To put things in perspective, even if every human being on earth spent a hundred dollars on media technology, the total would only add up to $610 billion, since the current estimated population of the world is 6.1 billion. For that matter, 1.7 trillion is more than the number of all the people who ever lived on the earth, which stands at an estimated 96 billion people (Ramsey, 1999). All this sounds like a growing global economy, a vibrant setting for increased communication, and a world of people who are enjoying more comfort than ever before, all of which are good. Yet sift through the data in their analysis and you will read about an “increasing dependence [italics added] on wireless phones” (PricewaterhouseCoopers, 2004, p. 17). How dependent are we on our media technologies? Try to keep track of how much you spend or have to spend to keep up with media technology – and I am not only speaking in financial terms. Or when was the last time you were concerned about or had to deal with a computer conundrum? Or had an old technology that just would not play in the new devices?
Where do you get your news? The Television Bureau of Advertising (2003) conducted a media comparison telephone survey among 1,017 adults over the age of 18; 525 (51.6%) of the respondents were female, and 492 (48.4%) were male. The sample used for this study was a list of all telephone numbers among exchanges that operate within the United States. In order to properly represent each day of the week, an approximately equal number of interviews were conducted each day over a 14-day period, from January 13 through January 26, 2003. In all cases, the order of the media was rotated to prevent bias. The results of this study revealed that adults 18 and over spend significantly more time with television than with any other media – an average of 4.3 hours in a day compared to the next closest popular media form, which is radio at 2.0 hours a day. The Internet clocks in at an average of 1.1 hours a day for this demographic group. 43.6% of these adults cite broadcast television as their primary news source, with 28% attached to their cable news networks, and another 12% to newspapers. 81.8% of the surveyed population perceive television as ‘most influential’, with newspapers a distant second at 8.5%. Furthermore, looking at studies that confirm an association between loneliness and Internet use (for example Amichai-Hamburger & Ben-Artzi, 2002; Kraut et al., 1998; Lavin, Marvin, McLarney, Nola, & Scott, 1999; Morahan-Martin & Schumacher, 2003) or research suggesting that Internet use is likely to lead to addiction (Loytskert & Aiello, 1997; Morahan-Martin & Schumacher, 2000; Young, 1998; Young & Rodgers, 1998), and one is left to wonder if we have gotten so distracted with what we can do with media technologies that we have forgotten to look at the big picture and think about what we should do with media technologies.
Then there are the debates that continue over whether there is a correlation between the exposure to media violence and an individual’s exhibition of violence. Looking through the published research, one gets the feeling that there exists a large academic subculture whose primary interest is to investigate media violence effects. Looking further at the more recent studies, one sees published confirmations that though the extent of the effects and the mechanisms of the effects remain elusive, exposure to media violence increases aggressive, risky, and/or fearful behavior (Bartholow, Bushman, & Sestir, in press; Browne & Hamilton-Giachritsis, 2005; Gentile, Lynch, Linder, & Walsh, 2004; Greene & Krcmar, 2005; Schneider, Lang, Shin, & Bradley, 2004; Swanson, 2004). Then consider that nine out of ten top-selling video games contain violence, of which half contain serious violence, and 17% feature violence as the primary focus of the game (Kaiser Family Foundation, 2002). Sternheimer (2003), in her book *It’s Not the Media: The Truth About Pop Culture’s Influence on Children*, argues that “scientific proof of a causal relationship between video games and violence has not been clearly demonstrated” (p. 111); yet one tends to respond to *Doom* type video games (where the essential idea involves the heavily armed player dodging attacks, shooting every moving thing in sight, and experiencing the glorified gore effects) by asking if the mass production of violent media technology content “is wasting an enormous resource that might otherwise be capable of tremendous public good” (Trend, 2003, p. 305)? This response does not even have to get into a more noble vision such as that which St Paul proposed: “whatever is true, whatever is honorable, whatever is just, whatever is pure, whatever is lovely, whatever is gracious, if there is any excellence and if there is anything
worthy of praise, think about these things” (Philippians 4:8, New American Bible).

Even if media technology content does not tell us how to think, it can influence what we think about. It is hard to imagine that one might think of something gracious, let alone true, honorable, just, pure, or lovely after an immersive and intense ‘frag-fest’:

Ours is an age besotted with graphic entertainments. And in an increasingly infantilized society, whose moral philosophy is reducible to a celebration of “choice,” adults are increasingly distinguishable from children in their absorption in entertainments and the kinds of entertainments they are absorbed in – video games, computer games, hand-held games, movies on their computers and so on.

This is progress: more sophisticated delivery of stupidity. (Will, 2001)

Even infants and toddlers are not spared from the permeation of the media technologies in their young lives. From “videotapes and DVDs aimed at infants one to 18 months [to] a multi-million dollar industry selling computer games and even special keyboard toppers for children as young as nine months” (Rideout, Vandewater, & Wartella, 2003, p. 2), there is a booming media technology market supported by homes with video game consoles (49%), TVs in the children’s bedrooms (36%), and computers at home (73%) with Internet access (63%). And with 65% of children ranging in age from zero to six years old in homes with TVs that are on at least half the time or more, even if no one is watching, television programming has become a “near-constant presence” in a preschooler’s life (p. 4). All this, and we have not even considered the phenomenon for older children of what has come to be called continuous partial attention, or the habit of, for example, watching TV, typing emails, surfing the web, and instant messaging all at
once (Is this different or similar to adults stretching their concentration limits, frequently scanning the electronic periphery, and paying only partial attention to someone else they are physically with because they are on the cell phone, or checking a PDA, or listening to a portable music player?) Is this a sign of meaningful relationships and a well-ordered, disciplined lifestyle, or a need to be in control and to be constantly an active doer and producer? Currently, the longitudinal impact of this level of media exposure on child development is unknown (p. 12).

Consider, then, the resources that have been directed towards the application of media technology in education. On January 1, 2005, the U.S. Department of Education published the document *Toward a New Golden Age in American Education* that sought to provide “an opportunity to reflect on the progress the nation has made as a result of a decade of increased federal, state, local, and private investments in connecting classrooms to the Internet, providing students with computers, and equipping teachers with the skills to use technology as an instructional tool” (U.S. Department of Education, 2005). “Yet, we have not realized the promise of technology in education” and “students mastered the wonders of the Internet at home, not in school” (p. 10) were part of the report. The document also presented findings supporting the trends we saw earlier in that the “largest group of new users of the Internet from 2000-2002 were 2-5 year olds” (p. 17). And from a survey of 210,000 K-12 students representing schools in all 50 states, the district of Columbia, Puerto Rico, and on American military bases worldwide, the five major themes that emerged from the students’ comments are worth noting because they
support the understanding of the relevance of media technologies to the students’ daily lives:

1. Today’s students are very technology savvy, feel strongly about the positive value of technology and rely upon technology as an essential and preferred component of every aspect of their lives.

2. Students are not just using technology differently today but are approaching their lives and their daily activities differently because of the technology.

3. As students get older, their use of technology becomes more sophisticated, but, comparatively, the younger students are on a fast track to becoming greater technology users and advocates.

4. The access point for technology use, particularly for older students, is home-focused, not school-focused.

5. Today’s students are ultra-communicators. (p. 19)

And by ‘ultra-communicators’, the study refers to students who are “using online communications tools to brainstorm school projects with classmates, to seek help on homework from a tutor, to update a cousin in another state on the family reunion and to make social plans with friends for Saturday night. All at the same time” (NetDay, 2004, p. 6). The survey question, from which the above findings were primarily drawn, was open-ended and allowed students to write responses in their own words. It was phrased as follows:

Well, here is your chance to share that good idea. Think about your own use of technology and your classes in school. Can you think of a way that your teachers
or your school could use technology better? If so, please share one of your recommendations with us in 100 words or less. (NetDay, 2003)

Perhaps a sampling of the specific comments from the students surveyed is most telling of their attitudes and expectations of media technology engagement in learning and in education. Six representative student comments from the survey of grades 6-12 are noted here:

1. We would like to have one computer per student, possibly a wireless laptop. Software needs to be updated, as well as hardware. Infrastructure should be improved to accommodate these upgrades. Access is vital, with before and after school hours open for use.

2. Hire people to keep the computers running, give us more bandwidth and less firewall, enable hookups from home, give the teachers more training and give us more computer classes. We’re also interested in ITV and online classes.

3. I would like them to let us kids sign laptops out of the library and there would be enough for everyone in the school. Or they could give us a laptop for the year. (U.S. Department of Education, 2005, p. 20, see also NetDay, 2004)

4. I think we should be able to go anywhere and be able to do anything with technology. (NetDay, 2004, p. 12)

5. It is a great idea for students to be able to communicate with each other throughout the day with IM. And it would be nice to just IM a teacher in class if you had a question. (p. 21)
6. I think it would be really cool if instead of textbooks we had computers and our textbooks were on the computers. That would be awesome. (p. 26)

Given that the goal of the survey was to “collect authentic, unfiltered input from K-12 students about their use of technology and their ideas on how technology should be used within their education” (p. 2), from these representative student responses, what do you think the students are concerned about? Will more spending on more computers, more people hired to keep the computers running, more teacher training, more bandwidth, more computer classes, and more laptops lead to better education, better students, and better human beings? Is ‘more’ the answer? How should our answer be qualified? Equally informative are the comments from the survey of students in grades 3-6. The following are representative of their outlook:

1. Teachers could show more videos and web sites to show kids more information in social studies and science.
2. I think that students should have laptops to do everything in class. We can type our homework, schoolwork, copy notes and things like that. We should not have to carry heavy books all day long and bring all of our books home.
3. I really think that we should go to computer lab more often so that we can learn more about the world around us and what’s going on. (U.S. Department of Education, 2005, p. 21, see also NetDay, 2004)
4. Give each student a PDA and a calculator to help improve their learning and math skills (NetDay, 2004, p. 10)
5. I would put 30 computers in each classroom. (p. 17)
6. We should get PDAs to help organize ourselves. Laptops with wireless cards so that we can access the Internet and the network both at home and at school. (p. 24)

Do the comments indicate that the students are focused on what they have learned from or through the use of media technologies, or do the comments suggest an attachment to media technologies in everyday life and an expectation, therefore, for media technology integration in their education? Do culture and education interrelate (e.g., McLoughlin, 1999, p. 232)? Is much of what is awry in education a mirror of the same in society?

If education and media technologies are interconnected with culture and society, look at what is currently being studied and reported to address education and media technology integration. A search in a major education database such as ProQuest reveals that a foremost concern amongst contemporary authors is methodologically oriented, meaning that there is more attention paid to methods of instruction with media technologies (and the impact on learners) than there are to studies about the meaning or nature of media technologies in education (cf. Christensen & Knezek, 2001, p. 7). And while research on methods are good and necessary, and there have been numerous anecdotal reports of beneficial applications of media technologies, a focus on methods to the exclusion of the meaning and philosophy for media technology integration in education leaves a methods-based course somewhat lopsided, without its moorings to the ontological or essential nature of education. Jacques Maritain (see Appendix A), the Catholic writer and philosopher of the twentieth century “who will be remembered as one
of the great and inspiring teachers of our day” (Gallagher & Gallagher, 1962, p. 9), cautions that

An educational theory based on empiricism will cover the whole development of the youth and be interested in the cultivation of the rational and spiritual powers of his mind, but in so doing it will be ignorant of the very nature of these powers, disregard their proper needs and aspirations, and bring everything back to the ambiguous level of the development of a child of man in terms of simple animal life and development. (p. 46)

The basic question of whether technology improves learning becomes not so simple after all in the case of *sola hermeneutica*, when all that we focus on are the modes of learning and the methods of instruction. Indeed, there is relatively little hard, irrefutable, empirical proof that media technology has a direct, unqualified benefit to teaching and learning (for example, Alliance for Childhood, 2000, 2004; Cuban, 2001; Oppenheimer, 2003; Peck, Cuban, & Kirkpatrick, 2001, 2002; Rankin & Hoaas, 2001; Zhao, Pugh, Sheldon, & Byers, 2002). One reason often cited is that when it comes to measuring media technology benefits, “it is practically impossible to separate the medium from the message, or from the messenger….In other words, the medium (technology), message (content) and the messenger (presenter or teacher) are inextricably linked” (Simons, 2004, p. 26). Thus, for example, if you focus on educational methods, or on the capabilities of the media technologies, and then ask a question such as “Should I use PowerPoint slides for my lesson?” then you are also necessarily and logically asking what the lesson is about? Is it presented in a lecture form or in a discussion group setting
or even in an online environment? What are the learning styles of the students? What best teaching practices should I adopt? Should I incorporate hyperlinks in my PowerPoint presentation? Should I use video, audio, animations, and/or images? How do I evaluate and assess the learning outcomes? And even if you successfully address all these issues, which are but a sampling of the myriad instructional questions possible, how do you ascertain that the integration of media technology (PowerPoint in this case) caused the particular learning outcome? How do you know if it is not your presentational style, the content itself, the specific environment, or the particular receptiveness of the students? Perhaps it is valuable to look at media technology and education through a different worldview.

S. Johnson (2005), in his book *Everything Bad Is Good For You: How Today’s Popular Culture Is Actually Making Us Smarter*, tries to do this. He contends that popular culture and the media technologies it embraces, contrary to the prevalent view that it is leading the human condition in a spiral down into a bemused mess (for example, Mander, 1978; Postman, 1985), is actually making us smarter. His is a view through a lens of the latest video games and modern prime time television programming. His argument is that the increased complexity of modern media technologies, compared to those of yesteryear, necessitate an unprecedented heightened cognitive level on the part of the audience. Accordingly, far from the idea that video games today are hand-eye coordinated diversions, point and shoot distractions, Johnson argues that the rich immersive experiences of modern games demand problem solving, goal oriented thinking as well as nimble mental adaptation to ever changing game objectives (p. 42–51). Similarly, in the
realm of TV programming, he proffers the multi-level story arcs both within a modern
TV episode and throughout a series’ season as evidence of the viewers’ requisite
increased analysis, memory recall, and intellectual effort of “filling in” plot structures in
order to even rudimentarily follow a narrative. He explains this practice of “filling in” as
a mental process of “making sense of information that has been either deliberately
withheld or deliberately left obscure” (p. 63).

With increasingly ill-defined scenarios and even contradictory states that one has
to sort through in the media (recall the observation that Archbishop Foley made regarding
information and disinformation in the media, as reported by Zenit, 2005b, para. 8), there
is a corresponding increase in the complexity of the environment in which we are
immersed. As a result, this multifaceted setting requires more cognitive effort and more
mental considerations to be processed. The concomitant result is that we become smarter
and more intellectually skilled. These skills, which are naturally and willingly learned,
are transferable to other facets of life, including the important component of life that is
education. But S. Johnson (2005) also argues that the content is not what we should be
concerned about: “It’s not what the player is thinking about, but the way she’s thinking”
(p. 60). He questions the scenario that “we’re raising a generation of cognitive superstars
who are nonetheless ethically rudderless” (p. 188). Accordingly, he supports the
following viewpoints:

That is why we urge parents to instill a general love of reading in their children,
without worrying as much about what they’re reading – because we believe there
is laudable cognitive benefit that comes just from the act of reading alone,
irrespective of the content. The same principle applies to television or film or games (p. 190). Instead of worrying about a show’s violent or tawdry content…the true test should be whether a given show engages or sedates the mind (p. 193). The commonsense rule still applies: moderation in everything…but neither should we deny ourselves the occasional obsession. (p. 194)

We are left to wonder: are we there yet? Is this the answer to media technology engagement: that it makes us smarter and intellectually skilled, and that regardless of the influence of the content, we should be satisfied with our state of development? So when S. Johnson (2005) proposes that “today’s popular culture may not be showing us the righteous path, but it is making us smarter” (p. 14), should we be proud of our situation? If so, the promise of the media technology era for education looks foreboding and unfulfilled, because if we stop here on our journey, we still do not have that familiar feeling of having come home to our senses, and to who we are as human beings created for grandeur (Vatican II, 1965b, para. 13), for freedom (para. 17), and for loving communion (para. 19).

Is attention to content less needed or unnecessary? Or to parlay and slightly alter a famous aphorism, is the medium *alone* the message? Marshall McLuhan, who first coined the phrase “the medium is the message” in his book *Understanding Media* (1964), meant that society was paying so much attention to the content that the medium itself was overlooked and unobserved. Casual readers and his interlocutors mistook this to mean that what we see and hear in the media is unimportant (cf. S. Johnson, 2005, p. 176; see also Levinson, 1999, p. 36). To the contrary, McLuhan (1999) even goes further to state
that “in Jesus Christ, there is no distance or separation between the medium and the message: it is the one case where we can say that the medium and the message are fully one and the same” (p. 103). So when S. Johnson (2005) proposes that “parents and peer groups are still vastly more influential where values are concerned than Tony Soprano or the carjackers of Grand Theft Auto” (p. 188), there is the distinct danger that we are being lulled into complacency (e.g., We’re okay where we are as a society. Everyone could use improvement, but basically I’m a good person – nothing like that Tony Soprano.), or that we are making excuses for ourselves (e.g., I can still play Grand Theft Auto because it’s really my parents and friends who influence me the most). And either option does us no good as individuals or as a society (So what do you think influences our parents and friends?). What we consider the norm for how we live is subtly but powerfully being shifted by our Friends on TV more than by the radical Sopranos or by Joey Leone in GTA. A media technology engagement policy that creates excuses, instead of appealing to what is healthiest for society and for the individual, tends to engender obsessions and ends up creating ‘golden calf’ media technology idols. Clearly, our policy, and especially one for education, requires an approach that seriously considers the well being and dignity of each human person.

Have we gotten ourselves into a mess? Reading this section should leave you feeling that, as a culture, we have befuddled and deluded ourselves. To paraphrase G. K. Chesterton (1910), modern man has not only lost his way, he has lost the address as well (part 1, chap. 9). Yet, the Catholic message remains one of clarity and of resounding hope – not in the way of a whimsical, wishful thought, but in the firm and secure virtues of
trust, expectation, and anticipation. Already, we hear the clarion call “Do not be afraid!” (John Paul II, 2005c, para. 14).

Journeying forward, we require a ‘total vision’ of media technology engagement grounded in the perspective of the totality of the human person (John Paul II, 1990a, para. 7; see also Pontifical councils, 1971, para. 107). We need a policy that takes all the above considerations into account: from attention to form and content, to the value of media technology rather than a focus on the quantity of media technologies; from a view of media technology as an aid to human unity and relations, to the methods and meaning of education. In a world and culture that promulgates the digital lifestyle as the standard and norm, we need a foundation of key principles that will steer Catholics in the proper direction in media technology engagement.

The journey into the domain of proper Catholic media technology engagement necessarily entails a journey through the outer lands of (a) the Catholic worldview, (b) the Catholic worldview of education, and (c) the Catholic worldview of media technology. A trip through the neighboring land of a secular worldview of media technology in education also proves informative. Rather than recount the initial three journeys that took me progressively deeper into the heart of the media technology and Catholic education realm, this story, like other successful movie trilogies and prequels, chooses to premiere and focus on the fourth episode.

A New Hope

On April 2, 2005, a professor who by the age of 36 earned dual doctorates in Philosophy and Theology, and held the Chair of Ethics at Catholic University in Lublin,
which in the 1950s was the only Catholic university in the communist world, died at the age of 84. His name was Karol Josef Wojtyla, better known to the world as Pope John Paul II (see Appendix A). In his apostolic letter *The Rapid Development* (see Appendix B), written between hospital visits, and his last in a long chain of communiqués before his death, Pope John Paul II (2005c) urged the peoples of the Catholic Church to rethink their attitudes toward media technology (para. 8). In particular, his clarion call for effective *education* and integration of media technology is clearly discerned:

A *vast work of formation* is needed to assure that the mass media be known and used intelligently and appropriately. The new vocabulary they introduce into society modifies both learning processes and the quality of human relations, so that, without proper formation, these media run the risk of manipulating and heavily conditioning, rather than serving people. This is especially true for young people, who show a natural propensity towards technological innovations, and as such are in even greater need of education in the responsible and critical use of the media. (para. 11; see also Pontifical councils, 1971, para. 48)

We can wonder at the significance of this his last apostolic letter, that it was written about media technologies and titled ‘rapid’ despite his slowing and ailing health, but his intention for Catholics is explicit in the strength of his encouragement:

Do not be afraid of new technologies! These rank "among the marvelous things" – "inter mirifica" – which God has placed at our disposal to discover, to use and to make known the truth, also the truth about our dignity and about our destiny as his children, heirs of his eternal Kingdom. Do not be afraid of being opposed by the
world! Jesus has assured us, "I have conquered the world!" (John 16:33). Do not be afraid even of your own weakness and inadequacy! The Divine Master has said, "I am with you always, until the end of the world" (Matthew 28:20). (para. 14)

An encouragement to the peoples of the Catholic Church to properly engage media technologies was already raised in 1963 in the conciliar document *Inter Mirifica* (Pontifical councils, 1963; see Appendix B). Some highlights of the pastoral directives and encouragements made include:

The Church, our mother, knows that if these media are properly used they can be of considerable benefit to mankind. (para. 2)

If the media are to be correctly employed, it is essential that all who use them know the principles of the moral order and apply them faithfully in this domain. (para. 4)

Those who are at the receiving end of the media, and especially the young, should learn moderation and discipline in their use of them. They should aim to understand fully what they see, hear and read. They should discuss them with their teachers and with experts in such matters and should learn to reach correct judgments. (para. 10)

All the members of the Church should make a concerted effort to ensure that the means of communication are put at the service of the multiple forms of the apostolate without delay and as energetically as possible, where and when they are needed. (para. 13)
Additionally, a call to respond to the question of how Catholics should integrate media technology in education was raised in 1971 by the Roman Catholic Church in their definitive document on social communication *Communio et Progressio* (Pontifical councils, 1971; see Appendix B). This pastoral instruction on the means of social communication was initiated by the second Vatican council and recognizes the profound affective power of the media technologies in very *positive* terms: as a means for ‘unity and advancement’ of humankind (para. 1) and as ‘gifts of God’ (para. 2). The document maintains: “Communication is more than the expression of ideas and the indication of emotion. At its most profound level it is the giving of self in love” (para. 11). It goes further in stating that:

The Church considers it to be one of her most urgent tasks to provide the means for training recipients in Christian principles…. The means of social communication have an ever growing role to play in the vast field of human education….Catholic schools and organizations cannot ignore the urgent duty they have in this field. These schools and institutions will take care to teach young people not only to be good Christians when they are recipients but also to be active in using all the aids to communication that lie within the media, now called the ‘total language’. So, young people will be true citizens of that age of social communication which has already begun….Religious education too, ought to include instruction on the modern media and their principal implications….Parents, educators, priests and Christian organizations should
encourage young people with the right qualities to take up a career in social communication. (para. 48, 107 – 109)

Using the language of the document, it may be said that to successfully learn the ‘total language’ of communications and to effectively use ‘all the aids to communication’ entails a total vision of social communication that integrates media technologies in education, which necessarily includes ‘instruction on the modern media and their principal applications’. But what does this mean to Catholic educators? How can Catholic educators employ these words, this vision in a practical way to design and integrate media technology in the subject areas that they teach? Clearly, we are in need of some aid, in need of policies that help to define Catholic media technology engagement.

A Note on Practicality

If one considers the pastoral documents on social communications to be grounded on principles that connect us all as human beings created in the image and likeness of God, then the practicality of Catholic teaching as evidenced in the pastoral documents is profoundly practical. These documents are grounded on fundamental principles that lead us to be fully members of the family of God with a ‘total vision’ of human dignity. In a sense, you might say that this is the practicality of being and of orientation to objective truth. To be relevant in various circumstances, then, there is a level of generality that the documents necessarily have to have:

This Pastoral Instruction, which is being published at the direction of the Second Vatican Council, sets out basic doctrinal principles and general pastoral guidelines. It carefully refrains from going into minute details on a subject which
is continually changing and developing and which varies so much according to time and place. (para. 3)

But if practicality is based on a cultural understanding from the standpoint of the material technical professions within social communications, then it may not be understood as being ‘practical’. In a sense, this might be called a practicality of *operabilia*, of doing and of acting upon proper objects. The practicality of the policies that I address here, though grounded on the practicality of *being*, is one of *action* that I hope is understood and can be applied by all educators, practitioners, and consumers of media technologies.

Also, I have chosen not to comment at length regarding the ‘automated’ administrative functions that technologies can perform. For example, databases and computers are useful in calculating students’ scores, sorting activities, and keeping track of lesson plan components. Instead, the focus here is on the engagement of media technologies as experiences in daily living, from entertainment to education, from conversations about media programs to perceptions of the connectedness of media technologies to the reality we live in. Just as media technologies are part and parcel of our culture, so too by extension, they have become an expected component of education and of learning activities. Accordingly, the importance of media technologies in education is a fundamental element of the Catholic worldview.

A Note on Virtuality and the Catholic Worldview

The experience of God ordinarily takes the form of the experience of the immanent and the corporeal. So, how does the concept of the virtual nature of media
technologies fit into the picture? The Oxford English Dictionary defines virtuality as an “essential nature or being, apart from external form or embodiment”. The more familiar term is ‘virtual reality’, but this latter phrase brings with it inherent contradictory issues when seen in the light of the Catholic worldview. Specifically, since ‘reality’ refers to existent beings and ‘virtual’ does not, the phrase ‘virtual reality’ in the Catholic worldview is an oxymoron (Prokes, 2004, p. 9). Perhaps Heim (1993) in his book *The metaphysics of virtual reality* describes virtual reality most aptly as: “an event or entity that is real in effect but not in fact” (p. 109). A key Catholic concept is that human beings are corporeal persons destined for eternal life as a unity of body and soul. The Catholic worldview sees the incarnation as the revelation of our human condition (Vatican II, 1965b, para. 22), and sees a ‘theology of the human body’ as an experiential fact (cf. John Paul II, 1997). Stated simply, you experience the world through your body. As such, there is a tension in speaking about ‘virtuality’ and the Catholic worldview. This tension exists between two fundamental and tightly interconnected concepts: (a) the physical, material, body-presence of the human person, juxtaposed with (b) the gift of imaginative and meditative thought, or the immanent aspect of the human person. These two aspects come together powerfully in the sacraments of the Catholic Church. The Catechism of the Catholic Church describes the sacraments as “perceptible signs (words and actions) accessible to our human nature. By the power of Christ and the power of the Holy Spirit they make present efficaciously the grace they signify” (Liberia Editrice Vaticana, 1997, para. 1084). But in ‘virtuality’, only the immanent is possible. This limitation of the nature of virtuality necessarily means a limitation of the applicability of media
technologies in many physical aspects of human existence. The inability to have the full efficacy of the sacraments conveyed through media technologies or to have full interpersonal relationships solely online (in both cases because of the necessity of physical contact) are examples of this limitation, and it is not an arbitrarily defined limitation that humans place on the definitions of sacraments or of human relationships, but rather a logical extension of this virtual-immanent aspect of media technologies (see for example, Prokes, 2004; Schultze, 2002, p. 202). In the conciliar document *The Church and Internet*, the notion of virtual reality properly ordered is clearly affirmed:

Virtual reality is no substitute for the Real Presence of Christ in the Eucharist, the sacramental reality of the other sacraments, and shared worship in a flesh-and-blood human community. There are no sacraments on the Internet; and even the religious experiences possible there by the grace of God are insufficient apart from real-world interaction with other persons of faith. Here is another aspect of the Internet that calls for study and reflection. At the same time, pastoral planning should consider how to lead people from cyberspace to true community and how, through teaching and catechesis, the Internet might subsequently be used to sustain and enrich them in their Christian commitment. (Pontifical councils, 2002a, para. 9; see also John Paul II, 2002, para. 3)

Then there is the issue of the need to incorporate ethics and morality within virtual worlds. As Bartle (2004), defining himself as an atheist (p. 587), in his text *Designing Virtual Worlds* admits:
Believe it or not, the designers of virtual worlds carry a responsibility for the consequences of their designs. Real people play in these worlds, and the effects that a design has on them are real. Naturally, players themselves are in many ways accountable for their own actions. Nevertheless, designers ought to be aware when some aspect of their design is likely to become an issue; its inclusion then becomes an artistic statement, rather than merely an element of gameplay.” (p. 671)

Even here in the immanent, a framework for morality and virtuality is needed to guarantee “freedom, and to keep them from becoming instruments of society’s strongest” (Zenit, 2002, para. 1), otherwise factors such as profitability and relativism are likely to supercede concern for human dignity in the control of the design of virtual worlds.

In education, too, when we look through the lens of the Catholic worldview, there is cause for concern. Some educators discuss education and virtuality by narrowly focusing on learning methodologies. For example, Harper, Hedberg, & Wright (2000) contend that for construction of knowledge, learners need to be placed in “authentic environments that incorporate sophisticated representations of context through such constructs as ‘virtual worlds’” (p. 166). However, given our understanding of virtuality as effect and not fact, this ‘authentic’ environment is not entirely authentic because it does not take into account all aspects of the total human condition. The question in terms of education with media technologies thus becomes: “In what ways do media technologies limit the total education of the human person?” The answer to this question and the issue of virtuality opens another world of possible explorations for discussion, which is not the
immediate focus of this dissertation. I would submit, however, that the roots of this discussion on virtuality are nascent within the seven keys conceptual framework proposed here. I include this note on virtuality to alert readers to the need for continuing study on the unity that must exist between the virtual-immanent and the corporeal-material reality. Since the Catholic worldview of education entails a total education of the human person, then both the virtual and the corporeal must be addressed in unison.

The Unconsidered Case of Sensory-Experiential Events (SEEs)

We need to make one last stop before we derive the keys to Catholic media technology engagement. It is an important stop in that it defines the form of experience that is proper to media technology as understood through a Catholic worldview. I shall elaborate more on the Catholic worldview of experience with regard to education a little later, but for now, I have chosen the term sensory-experiential events (SEEs) to refer to this form of experience that is proper to media technology, and which when used appropriately, can be a most powerful ally to learning. I define sensory-experiential events as a specific domain of media technology that focuses on the physical human senses and the emotional appeal that may be produced. At this point in media technology development, the senses of sight (visual, images, motion), sound (aural, audio effects, music), and touch (tactile, interactivity, kinesthetic) are the predominant stimuli. Imagine going on a roller coaster ride. You experience the sensation of sitting in a heaving, shaking, and rocking car that reels and rockets around a weaving track high in the air. You are grasping the safety bars that do little to compensate for the lurching motion. Along with the sound of teenagers screaming in delight (or fright) ringing in your ears,
you glimpse the blur of scenery careening past your peripheral vision (or half-shut
eyes). This roller coaster sensation (amusement?) leaves relatively little to the
imagination, and much to the experience itself. With the continued acceleration towards
increased realism that involves progressively more of the senses, media technology seeks
a similar, if not identical effect.

Seeing SEEs in Journeying Through the Three Ages

In a sense, Innis (1951), McLuhan (see Appendix A), and Ong (see Appendix A)
saw this concept coming. Their work, taken together, postulate that there are three
predominant periods describing the primary focus of media technologies and their
powerful influence on society and culture. The first such period comprised the oral age
where you had to listen and trust one another to a sufficient degree to either reject what
you heard or believe the message in order to convey it. Humanity was tribal in its
communication, and you experienced the world all at once and in the present with all
your senses, as there was no written word with which to ‘save’ thought or sensation.
Going to school meant listening and speaking – you would not write any notes. Try to
imagine having to repeat things aloud over and over again because in a primary oral
culture, conceptualized knowledge that is not spoken aloud soon vanishes. Memory was
aided by “thinking memorable thoughts” (Ong, 1982, p. 34) through the use of patterns,
rhythmic expressions, and assonances. Mnemonics, riddles, poetry, and narratives would
have been your ally if you were articulate.

Moreover, thinking was aggregative rather than analytic (p. 38). Consider what
formulatory language, for example, clichés could do for your memory: in a formal,
primary oral culture discourse, you would speak of the lion-hearted soldier, not just the soldier; the beautiful princess, not just the princess; and the mighty oak tree, not just the oak tree. Once a formulary expression became the common norm, it was to the advantage of the community to keep it that way. The alternative would have been to analyze information, which is to break expressions and thought apart. Without a writing system, analysis was “a high-risk procedure” (p. 39), as it would have meant many disparate parts of knowledge to memorize. And since the act of ‘knowing’ in this original context means to achieve close, communal, and empathetic identification with what is known, primary oral cultures were also participatory rather than objectively distanced. In contrast, writing creates a condition for objectivity because it sets up a distance between the knower and the known, with symbols that disengage the personal experience from a description of the experience (p. 45).

Which brings us to the second age, which arrived when society at large became literate in communicating through the written word. Chiefly propelled by the invention of the printing press in the fifteenth century, the primary literate age required a sequential mode of thinking and a technology with which to execute that presentation. For writing is a technology, “calling for the use of tools and other equipment: styli or brushes or pens, carefully prepared surfaces such as paper, animal skins, strips of wood, as well as inks and paints” (p. 80). It is hard for us to think of writing as such because we have interiorized it to such an extent that it has become a part of us and an extension of ourselves (McLuhan, 1964). When we write, one thought or word follows another. To present a carefully analyzed or even fleeting thought, we re-present the immanent on a
physical piece of paper, demarcating our thinking with ‘artificial’ conventions like paragraphing and with punctuation like the period that comes at the end of this sentence.

To describe a sunset as I did at the beginning of this dissertation, for example, I had to choose to describe one element of the scene at a time. If you were physically present at the beach, all those elements would be present to you all at once as your senses soaked them in. In print, you read linearly and translate these symbols back into ideas; books became the containers of knowledge with ideas in fixed locations that can be accurately reproduced. You can gain access to recorded knowledge so long as you can read. Reading itself soon came to be understood more as a solitary activity (you are probably reading this silently, alone with these words right now). Yet even so, there was a time early in this second age when reading meant reading aloud. McLuhan (1965) cites a passage from St Augustine’s *Confessions* where St Augustine finds Ambrose’s habit of silent reading such an anomaly: “But when he was reading, his eye glided over the pages and his heart searched out the sense, but his voice and tongue were at rest” (p. 86). Similarly, in the rules of the monastic Benedictines, we hear (pun intended): “After the sixth hour, however, when they have risen from table, let them rest in their beds in complete silence; or if, perhaps, anyone desireth to read for himself, let him so read that he doth not disturb others” (Rule of St Benedict, n.d). Today, we “tend to associate lip movements and mutterings from a reader with semi-literacy” (McLuhan, 1965, p. 83). In these ways, from the tribal nature of a primary oral culture to the individual nature of a primary literate culture, media technology has changed our perceptions, our thought processes, and the very way we live. This is not to say that media technology is “an autonomous
force, one that shapes us more than we shape it” (Blacker, 1994, para. 6), so much as our own choosing and allowing our use of media technologies to alter our habits and behaviors.

Yet, we only came to see this difference between orality and literacy because our familiarity with the new electronic age and its differences with print have sensitized us to the earlier contrasts (Ong, 1982, p. 2). Like fish that know nothing of water, we are so immersed in our media technology culture that it is hard for us to be sufficiently discerning of it and so to perceive or explain it well. If we changed as we progressed from the oral to the literate, have we been changed by modern media technology? On a simplistic level, even the word ‘hello’ itself came into popular use because of the telephone (Hawley, 2001, p. 25). In our electronic or primary media technology age, we experience the world through the visual, aural, and tactile of our computers, cellular phones, and TVs. Yes, even tactility is a mode of experience: “the mode of interplay and of being rather than of separation and of lineal sequence” (McLuhan, 1965, p. 240). We may no longer be a tribe, but we are a global village. We have our senses bombarded all at once with the media technologies. It would seem that we have gone full circle back to where we started – to the experiential. However, there is a difference between where we began and where we now are. We are also post-literate, experiencing a sort of “secondary orality’…which depends on writing and print for [our] existence” (Ong, 1982, p. 3). To explore this concept, McLuhan proposed a concept of light coming through a medium that has the power to capture our attention with an almost hypnotic intensity. He proposed as examples of this hypnotic effect, stained glass windows and the
light that shines through television screens. In this primary media technology age, computers are understood to combine the intensity of this ‘light through effect’ with the benefits of the primary literate age – the strong engagement combined with the ability to read lineal texts on the computer screen (Levinson, 1999, p. 9). Thus, our aim should not be to abandon the wisdom of the primary literate age from which we came in order to solely embrace the offerings of the primary electronic age, but to conscientiously inform our education and our work with the lessons learned from both previous ages (McLuhan, 1965, p. 135). It profits us to take note of Chesterton’s (1930) observation: “The fatal metaphor of progress, which means leaving things behind us, has utterly obscured the real idea of growth, which means leaving things inside us” (p. 2).

Seeing SEEs in the Literature

This idea of returning to the visual-aural-tactile-experience in our primary media technology age substantiates the idea of sensory-experiential events (SEEs) as the primary domain of media technologies. In a way, Ong corroborates this when he contrasts our conceptions of ‘communication’ and ‘media’. Thinking of human communication in terms of ‘media’ or its singular form ‘medium’ conveys the idea of a pipeline that transfers ‘information’ from one place to another (Ong, 1982, p. 172). In this modern model of human communication, units called ‘information’ are initiated from the ‘box’ of one human mind, the sender, then encoded in the ‘medium’, transferred through this medium-pipe, and are finally decoded in the human mind-box of the recipient. Such a model, according to Ong, is flawed and “distorts the act of communication beyond recognition” (p. 172). He proffers that
human communication, verbal and other, differs from the ‘medium’ model basically in that it demands anticipated feedback in order to take place at all. In the medium model, the message is moved from sender-position to receiver-position. In real human communication, the sender has to be not only in the sender-position but also in the receiver position before he or she can send anything. To speak, you have to address another or others. People in their right minds do not stray through the woods just talking at random to nobody. Even to talk to yourself you have to pretend that you are two people. The reason is that what I say depends on what reality or fancy I feel I am talking to, that is, on what possible responses I might anticipate. Hence I avoid sending out quite the same message to an adult and to a small child….To formulate anything, I must have another person or other persons already ‘in mind’. This is the paradox of human communication. Communication is intersubjective. The media model is not. (p. 173)

Because human communication operates on this deeper, richer, inimitable level, a human being has the capacity to share with another human being interiorly, cor ad cor, heart to heart. This allows for the formation of true communities, or more precisely, this allows for human communion. How does this conception that contrasts human ‘communication’ and ‘media’ parameterize the applications for media technology? Are there limits to communicating with media technology?

As another example, Mayer (2001) proposed a set of principles for effective multimedia learning. His goal was to summarize the results of empirical research aimed
at using words, pictures, animations, and narration together to promote optimal learning. These principles were demonstrated with practical applications in the text that Clark and Mayer (2003) co-authored: *e-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning*, which was mentioned previously. In this text, Clark and Mayer showed evidence that “people learn more deeply from words and pictures than from words alone” (p. 61) and with a corollary: “students learn more deeply from graphics with speech (for example, narrated animation) than from graphics with onscreen text (for example, animation with onscreen text blocks that appear sequentially as the animation plays out)” (p. 91). In contrast, Mayer (2001) also found that “students learn better when extraneous words, pictures, and sounds are excluded rather than included” and that “students learn better from animation and narration than from animation, narration, and on-screen text” (p. 184). Consider how these multimedia learning design findings corroborate the concept of SEEs. Seen in the light of SEEs, in the first case of words and pictures being more effective than words alone, we already learned from Ong (1982) how words as symbols in a primary literate age require an added level of interpretation and thus requires additional cognitive effort. The use of pictures that stimulate the visual experiential sense lends support to the cognitive effort of lineal interpretation of the textual symbols, thus aiding the learning process. In the second case whereby graphics with speech is more effective than graphics with onscreen text, Clark and Mayer (2003) propose that graphics and on-screen text together stimulate and greatly taxes the limited resources of the visual sense. On the other hand, graphics and speech spreads the cognitive workload by utilizing both the aural and visual senses, thus
reducing the load on each individual sense (p. 90). In the third case, whereby “adding interesting material can hurt learning” (p. 111), the authors propose three ways that extraneous pictures can interfere with learning:

1. Distraction – by guiding the learner’s limited attention away from the relevant material and towards the irrelevant material
2. Disruption – by preventing the learner from building appropriate links among pieces of relevant material because pieces of irrelevant material are in the way
3. Seduction – by priming inappropriate existing knowledge (suggested by the added pictures), which is then used to organize the incoming material (p. 122)

Based on the understanding of SEEs, media technology (multimedia learning comprised of words, pictures, and sounds is an element of media technology) may also be distracting, disruptive, and seductive if the goal of a lesson is for a lineal, sequential discussion (and thus based on a primary literate mode of sequential cognition). The notion of overloading the senses similarly explains the fourth case whereby animation and narration works more effectively in learning than if the added component of on-screen text were present. In all these examples, the engagement (or over engagement) of the senses is at the heart of deciding if optimal learning occurs using media technology. The examples of media technology applications listed above employ the sensory-experiential domain that is primary to media technologies, and this use is proper to the value of media technology in education as ordered in our objective reality.

How else can we see the usefulness of our concept of SEEs? We could employ a study that, for example, quantitatively drew a large random sample from a population of
students, including those enrolled in classes that use media technology, then based on standardized tests, we can look for relationships between aspects of media technology use to these student test scores. In fact, such a study was conducted by Wenglinsky (2005) and reported in his text *Using Technology Wisely: The Keys to Success in Schools*. In his report, Wenglinsky utilized data from the National Assessment of Educational Progress (NAEP). The NAEP, also known as the nation’s report card, is administered every year or two in various subjects to nationally representative samples of 4th, 8th, and 12th graders in the United States. Begun in 1969, the tests are designed to assess a broad range of skills and knowledge, and the available data makes it possible to track and compare student performance over a number of years.

Two related noteworthy findings in Wenglinsky’s study were that “only if standards, teaching, and technology are oriented in a constructivist fashion will students learn what they need to fully participate in the new economy – the economy of the era of high technology” (p. 32), and that “the NAEP data consistently demonstrate that students perform better in classrooms possessing the characteristics of constructivism” (p. 64). Wenglinsky defines constructivism in two ways beginning with what constructivism is not. Constructivism is not a didactic teaching pedagogy. In didactic teaching, “students are taught basic skills primarily through having the teacher provide the knowledge and students receive it” (p. 11). Quite the opposite, in the constructivist approach, “students are taught complex problem-solving skills in an iterative process that moves from abstractions to concrete examples, where students control most of the learning process”
The didactic teacher is sometimes facetiously called the ‘sage-on-the-stage’, while the constructivist teacher is sometimes referred to as the ‘guide-on-the-side’.

Wenglinsky also asserts that “the effectiveness of educational technology is enmeshed in the kind of pedagogy employed. Constructivist uses of technology help students learn better than they would otherwise, whereas didactic uses of technology make the technology useless or even damaging” (p. 11). In the analysis of the NAEP data for educational technology use in the subject areas of mathematics, science, and reading, he found that in mathematics and science, where games and simulations were employed, “computer use is positively associated with student performance when computers are used in a constructivist fashion, and is either unassociated or negatively associated with student performance when computers are used in a didactic fashion” (p. 77). With regards to reading, on the other hand, he concludes that (a) “the role of computers as constructivist tools is somewhat more limited than in math and science; computers can help students organize and reorganize papers, teaching them about rhetorical structure, but when it comes to reading stories, a book will do better” (p. 76), and (b) “inferences are somewhat more difficult to make but suggest that when students use computers for word processing for meta-analytic purposes, students perform better, and when they are used for spellchecking or reading stories, students perform worse” (p. 77).

Looking at these findings through the lens of SEEs, we might propose that this particular form of constructivism, whereby concretized examples in games and simulations are employed, implies a sensory-experiential engagement of the lesson, and media technology utilized in this proper way was beneficial to learning and resulted in
the improved test scores. Furthermore, when Wenglinsky stated that for reading, “computers as constructivist tools [are] somewhat more limited than in math and science” (p. 76), and “inferences are somewhat more difficult to make” (p. 77), the concept of SEEs might shed additional light. Perhaps even though constructivist approaches were employed in the courses on reading stories, media technology, as understood through SEEs, is a distraction from the sequential, logical, lineal form of thinking and learning that is a principal characteristic of the primary literate age. At the same time, when media technology was used to perform writing and word processing tasks, the tactile and visual senses were necessarily engaged in these cognitive tasks of structuring and re-structuring, which might account for the improvement in scores.

Seven Keys to Catholic Media Technology Engagement

How do all the preceding parts come together? If you are feeling lost, I was too. That is until, by the flashlight of scripture and grace, I realized that I had made stops in the journey that precisely formed the map of the framework for engaging media technology itself. The reason it is hard to see the map, the big picture, is that we are right in the midst of it. Just as the Catholic worldview demands an engagement in and throughout the whole of the world, so too, we are in the midst of the culture and education that surrounds us. We are on the map, so to speak. If we use the example of a town, then we have stopped at the town hall, the library, the school, and a host of other places that make up the town. But to see the form of the town is another matter. It would have been easier to see the outline of the town if we had a balloon or an airplane. However, without such an aerial view, by examining the stops, by connecting the dots as
it were, we can still form a picture of the town. In a similar vein, we can pause to reflect on the stops along the journey to Catholic media technology engagement (How often do we pause to reflect in a fast paced media technology world? How constantly do we try to keep up, thinking that it is imperative that we do so?), charting, and taking note of even the course itself, then asking what the compass rose describes. What *directions* should Catholics take with media technologies in education and in their daily lives? What this compass describes is precisely what will make up the policies or framework for how Catholics are to engage media technology.

As such, this dissertation proposes a set of policies for media technology engagement. These policies are in turn grounded on the fundamental truths found in scripture and magisterial documents as well as discerningly mined from a wide range of other sources that offer wisdom about education and/or media technology. The journey demands that a bricolage of fields be brought into play. These include instructional and information technology, communications, educational psychology, theology, and philosophy.

The idea of bricolage is particularly appropriate for our purposes. A *bricoleur* is a quilt maker who aesthetically, logically, and poetically assembles an assortment of pieces to form an emergent construct and a unified whole. This montage is a “new creation” and is “fitted to the specifics of a complex situation” (Denzin & Lincoln, 2005, p. 4–5). It takes fresh forms as the “*bricoleur* adds different tools, methods, and techniques of representation and interpretation to the puzzle”, and essentially creates a gestalt (p. 4).

The original meaning that French anthropologist and philosopher Claude Levi-Strauss
proposed is also instructive: a *bricoleur* is adept at a large number of diverse tasks, and uses a thoughtful, considered approach, and the means at hand – the instruments around, the parts already existing – to get the job done (Costin, 2005, p. 10). Kincheloe (2001) expanded on this notion to further suggest that *bricoleurs* build bridges between various disciplines.

Accordingly, taking the pertinent conceptions from the various fields in turn and together, we then of necessity ask to what goal does education propel us? What undergirds the prudent application of media technology? What qualities unite the two – media technology and education – in Catholic thought and practice? Indeed, all the parts in our journey fit together to form a whole, a framework to be specific. Thus, I submit to you the seven keys for effective Catholic media technology engagement: Catholic media technology engagement requires a balanced attitude that is personal and truth-filled, inspiring skill development, and is motivated by and relevant to experience.

As a list of qualities, it may be presented thus:

1. Balanced
2. Attitude
3. Personal
4. Truth-filled
5. Inspires
6. Skill development
7. Motivated by and relevant to experience
As a teacher, I especially appreciate the acrostic that is naturally formed, which is both appropriate to the context and makes for, hopefully, an easy recall of the qualities. Each key is elaborated on in turn in the following sections.

Figure 1. Overview of the main contributors to the seven keys framework

**Balanced: Katholikos – Throughout the Whole**

‘Catholic’ is generally understood to mean ‘universal’ from the Latin *universalis*, which involves the concept of *unum*, ‘one’, and *vertere*, ‘turn’. It suggests the creation of a circle by going around a central point. While the concept suggests the inclusion of
everything within the circle, it also logically indicates the exclusion of that which is outside the circle. The Catholic Church chose a more accurate understanding of the term ‘Catholic’ from the Greek *katholikos* which in turn is formed by the words *kata*, ‘throughout’ and *holos*, ‘whole’. While *universalis* has a note of exclusion, of negativity, *katholikos* is unequivocally positive in its connotation (Ong, 1990, p. 347). How does the Church, referring to each and every one of us that makes up the body *ecclesia*, engage the media technologies in our age? Definitely not in confronting and destroying cultures, but rather in “[interpenetrating] these cultures, and not only on its own terms, but interactively” (p. 348). Rather than being pluralistic and adopting all aspects of a fallen humanity, “the church transplanted to a new culture can live in a way that fits that particular new culture without losing its own identity” (p. 347; see also The Sacred Congregation for Catholic Education, 1997, para. 16; Zenit, 2005e, para. 5). Archbishop J. Michael Miller (2005), secretary for the Vatican’s congregation for Catholic education, addressed some major concerns of balance in Catholic education that is immensely relevant for us today:

In an age of information overload, Catholic schools must be especially attentive to the delicate balance between human experience and understanding. In the words of T.S. Eliot, we do not want our students to say: “We had the experience but missed the meaning.” On the other hand, knowledge and understanding are far more than the accumulation of information. Again T.S. Eliot puts it just right: “Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information?” (section 4.1, para. 1 – 2) Intrinsically related to the
search for wisdom is another idea frequently repeated in Vatican teaching: the confidence expressed that the human, however limited its powers, has the capacity to come to the knowledge of truth. (para. 3; see also Appendix B)

This knowledge of truth necessarily encompasses all human knowledge – from philosophy to theology, from the sciences to the humanities and the fields in between – there is an interconnectedness of wisdom and knowledge in God who is all knowing (see for example, McLuhan, 1964, p. 347). Though it is an encouraging sign that there is an awareness of the need for the engagement of ethics, morality, and character development in secular education: “The best teachers integrate the intellectual, emotional, and spiritual aspects of teaching to create powerful learning communities….The most fundamental conclusion…is that moral purpose and sustained performance of organizations are mutually dependent” (Fullan, 2001a, p. 27 – 28; see also Gilness, 2003; Jeong, 2005; Leming, 2000, 2001; Narvaez, 2001; Verkerk et al., 2004), nevertheless the Catholic view of a balanced education is not only about the inclusion of the study and practice of ethics, or morality, or character development. The Catholic view of balance additionally seeks to connect knowledge to different disciplines and fields; to connect the corporeal to the transcendent, and to the relevant age and place that the Church participates; to make lessons relevant to the day-to-day recreations, work, temptations, struggles, sorrows, and joys in students’ lives. The need for educators and scholars who strive to bridge fields that are traditionally at a distance is even more pressing in this age of disconnect between what the faith is truly about and its perception (or misperception) in the media. Examples of fields that might benefit from this synergy include connecting the applications of
media technology to the analysis of the humanities, or connecting philosophical inquiries to the proper functions of media technology, or even connecting theological studies to the proper enjoyment of media technology.

Other issues of balance must also be attended to. For example, since “daily we are reminded that immediacy of communication does not necessarily translate into the building of cooperation and communion in society” (Benedict XVI, 2006, para. 2), so then how do we balance our time in engaging media technologies and in our communion with others? In our personal reflections, meditation, and prayer? Is there an openness to silence in the way we educate? In designing media technology lessons, do we even consider the importance of contemplative time? Unfortunately, from being utilized as a method of disciplinary action to construing disinterest in a discussion or in the subject matter, silence has negative connotations associated with it, and one is hard pressed to find silence as an accepted or welcome dialogical pedagogy in the educational literature (Caranfa, 2004, p. 211). Experiencing ‘the uncomfortable silence’ in conversations and in presentations demonstrates the fear that seems to permeate western culture regarding silence. Paulo Freire (1998), a late twentieth century thinker whose educational practice and liberation philosophies have been very influential (Smith, 2005), used the term “culture of silence” to describe oppressed and silenced people (p. 14). But by the proper understanding of balance, silence can and should be a part of learning pedagogies (Belanoff, 2001; Caranfa, 2004; Zembylas & Michaelides, 2004). For example, silence can be a space to reflect on what has just been communicated. It can “facilitate openness, receptivity, and hearing of the experience of otherness. Without such an experience of
silence, respecting the otherness of the Other is not possible; care, generosity, and compassion remain sentimental and distant objectives” (Zembylas & Michaelides, 2004, p. 210).

The Montessori (see Appendix A) practice of education also attaches an importance to silence in the learning process: “Being silent is a positive exercise, requiring positive effort, and not just an absence of noise, while the mind is occupied with other things” (Wentworth, 1999, p. 92; see also Cossentino, 2005; Lillard, 2005, p. 317). Silence is understood as a quality that fosters awareness and self-mastery, balances speech, and supports action. In fact, silence does not in any way preclude the inclusion of media technologies (cf. Lillard & Jessen, 2003, p. 16). One Montessori teacher cites its foundress Maria Montessori: “What purpose would education serve in our days unless it helped humans to a knowledge of the environment to which they have to adapt themselves?” (Hubbell, 2003, p. 41) and concludes that media technology complements the experiences in Montessori education. Furthermore, the idea of balance in the Montessori philosophy also takes the form of “discipline through freedom”. The opposite of ‘freedom’ is understood not so much as ‘discipline’, but ‘chaos’ because “chaos prevents teachers from doing what they want, hence it limits freedom” (Hainstock, 1997, p. 9; see also Wentworth, 1999, p. 52). In a similar approach to the Catholic worldview of education, the development of the whole personality of the student, from the academic to the social is important in learning and development (Cossentino, 2005, p. 234; Hainstock, 1997, p. 10; Loeffler, 2004, p. 27; Wentworth, 1999, p. 92). Montessori proposes:
If the idea of the universe is presented to the child in the right way, it will do more for him than just arouse his interest, for it will create in him admiration and wonder, a feeling loftier than any interest and more satisfying. The child’s mind then will no longer wander, but becomes fixed and can work. The knowledge he then acquires is organized and systematic; his intelligence becomes whole and complete because of the vision of the whole that has been presented to him, and his interest spreads to all, for all are linked and have their place in the universe of which his mind is centered. (Montessori, 1967, p. 9)

Balance is the first key to engaging media technology. The education of the whole person demands balance, and balance requires skill, practice, and a willingness to re-orient our center, our fulcrum as it were, and what we consider to be our ‘norm’.

*Attitude: The Catholic Worldview in Action*

February 21, 2005. The Catholic organization Zenit that reports on happenings in the Vatican and in the world announced that Pope John Paul II had released what we now know was to be his last communiqué:

John Paul II in a new apostolic letter calls the entire Church to a pastoral and cultural "revision" of its presence in and attitude toward the media. In the letter, made public today, the Pope says that ecclesial dynamism in the "global village" depends on this revision. The media, he observed, can be used "to proclaim the Gospel or to reduce it to silence within men's hearts”. (Zenit, 2005e)

The boldness and distinctiveness of this message can conceivably be better appreciated when we also recognize that perhaps Catholics have heretofore ignored the
media technologies. Some 15 years before his last apostolic letter, Pope John Paul II already recognized this general neglect of the use of media technologies and definitively described the modern equivalent of the Areopagus:

After preaching in a number of places, St. Paul arrived in Athens, where he went to the Areopagus and proclaimed the Gospel in language appropriate to and understandable in those surroundings (cf. Acts 17:22-31). At that time the Areopagus represented the cultural center of the learned people of Athens, and today it can be taken as a symbol of the new sectors in which the Gospel must be proclaimed. The first Areopagus of the modern age is the world of communications, which is unifying humanity and turning it into what is known as a "global village." The means of social communication have become so important as to be for many the chief means of information and education, of guidance and inspiration in their behavior as individuals, families and within society at large. In particular, the younger generation is growing up in a world conditioned by the mass media. To some degree perhaps this Areopagus has been neglected. Generally, preference has been given to other means of preaching the Gospel and of Christian education, while the mass media are left to the initiative of individuals or small groups and enter into pastoral planning only in a secondary way. (John Paul II, 1990b, para. 37).

Thus, particular attitudes, a change of mentality, and a pastoral renewal for the engaging of media technologies are much needed and greatly encouraged, including attention to education and catechesis, “that they be decisively inserted into pastoral
programs” (John Paul II, 2005c, para. 9). These attitudes should not only be reserved for communicators, but must also be embraced by “the entire Church community” (para. 8). Such attitudes must include continued attention to changes in media technology, awareness of the ethical and moral dimensions of information, recognition of a duty to seek a “better understanding of outlooks and responsibilities connected with current developments in communications [as well as] the positive development of the media at the service of the common good” (para. 10). In sum, an attitude is needed that builds bridges between authentic faith and everyday life through the practical actions of “formation, participation and dialogue” (para. 11).

In particular, attitudes of Catholic teachers greatly influence the engagement of media technologies in education. In addition to culling the best practices in research and discourses on teaching attitudes conducive to effective media technology instruction (for example, Benson, Farnsworth, Bahr, Lewis, & Shaha, 2004; Christensen, 2002; Czubaj, 2004; Hazzan, 2003), including training sufficiently to be adept at the ‘common’ media technologies, continual reinforcement of skills through practice to keep oneself up to date, participating in media technology development processes, and supporting one another (cf. The Sacred Congregation for Catholic Education, 1982, para. 68), Catholic teachers have to recognize and live out their “teaching as vocation rather than a profession” (para. 37). Pope Paul VI (1975) succinctly encouraged: “Modern man listens more willingly to witnesses than to teachers, and if he does listen to teachers, it is because they are witnesses” (para. 41). The Catholic teacher
cannot be content simply to present Christian values as a set of abstract objectives to be admired, even if this be done positively and with imagination; they must be presented as values which generate human attitudes, and these attitudes must be encouraged in the students. (The Sacred Congregation for Catholic Education, 1982, para. 30)

Palmer (1998), in his text *The Courage to Teach: Exploring the Inner Landscape of a Teacher’s Life*, speaks of the close connection between introspection and knowledge: “When I do not know myself, I cannot know my subject – not at the deepest levels of embodied, personal meaning” (p. 2). He proposes attitudinal paradoxes in the world of education that ought to be grappled with:

- We separate head from heart. Result: minds that do not know how to feel and hearts that do not know how to think. We separate facts from feelings. Result: bloodless facts that make the world distant and remote and ignorant emotions that reduce truth to how one feels today. We separate theory from practice. Result: theories that have little to do with life and practice that is uninformed by understanding. We separate teaching from learning. Result: teachers who talk but do not listen and students who listen but do not talk. (p. 66) The [teaching and learning] space should support solitude and surround it with the resources of community. (p. 76)

Wegemer (1998) in speaking of St Thomas More’s attitudes on education and achieving professional success has this to add (and I include parenthetical remarks to directly relate the ideas to teaching media technologies): success in teaching (media
technologies) depend on much more than a thorough command of the subject (software and hardware applications), which

like most other professions, requires for its proper execution the philosopher’s understanding of human nature (the same holds true for Catholic media technology educators), the rhetorician’s art in directing the emotions (the persuasive power of the media), the diplomat’s skill in counsel and negotiation (motivation and design of instructional technology), and the historian’s understanding of tradition (to comprehend and envisage media technology developments). (p. 48)

The question we must ask ourselves within this domain is what our attitudes are with regard to media technology? Do we consider the ways in which media technology straddles these paradoxes? Are we willing to continually reflect on how we are engaging media technology, and if necessary, to make changes in our practice? If it is our hands that create and apply media technologies, then we must have the attitude of ‘total education’ (see for example Gallagher & Gallagher, 1962, p. 134), of educating our hearts to inform our minds to guide our hands.

Personal: Fiat Homo; Concerning the Human Person

In a culture where media technology makes it possible to never have to be with or deal with another person, in what ways and in what direction is media technology transforming us? April 20, 1999, Columbine High School. A nation is shocked by the tragedy of school shootings that left 15 people dead. Given that the young shooters were allegedly video game aficionados –in particular the video game Doom, in which the
heavily armed player shoots various hellish creatures to protect the earth – media
technology influence became all the more closely connected with the exhibition of
violence (Sternheimer, 2003, p. 109). Of the numerous reflections and analysis that came
in the aftermath of the tragedy, many administrators and decision makers focused on
bolstering school security. However, a series of educators’ responses chose to focus on
the dire need to humanize and personalize the education system itself (for example,
Dunne, 2000; Poland, 2000). Other responses suggested that “spiritual, religious, and
family value factors may play an important protective role in strengthening resilience in
young people and minimizing at-risk behavior that may be associated with school
violence” (Windham, Hooper, & Hudson, 2005, p. 208), and that “an adolescent who is
prone to violent behavior might depersonalize others” (p. 213).

This practice of depersonalization is also at the heart of pornography, which is the
objectifying of a man or a woman, and clearly a concern today with the effortless access
afforded by the Internet. The solution to the problem of depersonalization is to take the
opposing stance, which is to uphold the dignity of each human person. A clear distinction
must be made here between being impersonal, which is to ignore another human person,
and to depersonalize, which is to reduce a human person to the status of an object, and in
so doing, to remove from one’s notion the dignity and value of another human being.

Care ought to be taken to properly understand the depth of meaning in this policy
of the personal in media technology engagement. Just as the concept of education as
cultural and personal renewal is not new (for example, Benne, 1975; Palmer, 1998), so
too, neither is the concept of human dignity at the heart of Catholic education (for
example, Miller, 2005; Vatican II, 1965b & 1965c). In the Catholic Christian understanding of the Creation, *fiat homo*, the creation of Adam and Eve was the epitome of God’s loving actions. All God’s creations were pronounced good, but the creation of Adam and Eve (and by extension, all humanity) was the climax and culmination of God’s creative activity, and was pronounced very good (Genesis 1:31, New American Bible; see also John Paul II, 1997, p. 29). The fact that man was created *imago Dei*, in the image and likeness of God, “affirms the absolute impossibility of reducing man to the world” (John Paul II, 1997, p. 28).

So when Clark and Mayer (2003), in their textbook *e-Learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning*, proposed a ‘personalization principle’ for the design of multimedia lessons, on the surface they seem to be addressing this need to focus on the individual student, a type of learner-centered approach to instructional technology lesson design. However, on further examination, by ‘personalization’, they mean “a conversational style of writing that uses first- and second-person language” as well as employing virtual “learning agents” (p. 131).

Media technology, properly oriented, must go further beyond just conversational styles and virtual coaches or characters. Properly oriented, media technology must allow for personal reflections and thinking (Azmitia & Crowley, 2001, p. 76), and must not enslave or dehumanize (see for example, C. T. Miller & Mazur, 2000, p. 294), even in the seemingly innocuous ways where we isolate ourselves, construct our own personally preferred realities, avoid those not like us, or ignore and refuse to look beyond the
technology to the person himself or herself. For example, it is very easy for online
discussion boards to attract and sustain only individuals who share the same worldview.
In considering online discussion boards within instructional technology, how can
educators guide and encourage diverse participation? How should Catholics live out their
call to tell the good news online without ending up merely affixed within their own circle
(cf. Zenit, 2006)? Catholics are corporately called to go (‘throughout the whole’ and)
throughout the world (e.g., Matthew 24:14, 28:19, New American Bible) as witnesses to
their faith. While affirming the dignity and uniqueness of each individual human being,
Catholics are concurrently called to live in community (e.g., Acts 4:32, New American
Bible; see also Liberia Editrice Vaticana, 1997, para. 842, 854, 1045, 1102, 2205). As
such, consciously sequestering oneself or limiting oneself to only those who share our
specific interests by means of the affordances of media technology is to not fully live out
the communal dimension of the Gospel message. (We are again reminded of the need for
balance.)

Additionally, we must recognize that human dignity does not hinge on a quality of
life as construed to mean the personal possession of sophisticated, up-to-date media
technology systems or to mean the number of gadgets we might own or carry with us.
Does an inordinate fixation with media technologies hinder me from person to person
encounters, personal responsibilities, and openness to others (Zenit, 2005c; see also John
Paul II, 2005c, para. 10; Zenit, 2005d)? How can educators who are integrating media
technologies help students mature in their interpersonal and intrapersonal capacities?
How should educators design instructional technology courses that account for those who do not personally own the most technologically sophisticated equipment?

If the concept of the personal dimension of media technology in education is ignored or underplayed, education for all may well end up becoming education for none.

*Truth-filled: Veritatis Splendor – the Splendor of Truth!*

The splendor of truth can be told if we honestly delve deeply into what connects us all as human beings – the same fears, dreams, sufferings, joys, and hopes that we all share in common. If a Catholic living authentically for the truth delves deeply enough to touch this foundational level and uses this center to launch the story or to teach a course, then the Catholic worldview comes through naturally no matter what the subject is, and comes in a way that is not offensive, nor defensive, nor artificial, nor by becoming a proselytizer. Employing a careful study for how different media technology channels work best (for example, Chesebro & Bertelsen, 1996; see also Clark & Mayer, 2003, p. 17), the Catholic communicator and/or educator has the responsibility to communicate the good news of the Gospel, with the proper intentions and invitations to God’s family:

Indeed, culture is only educational when young people can relate their study to real-life situations with which they are familiar. The school must stimulate the pupil to exercise his intelligence through the dynamics of understanding to attain clarity and inventiveness. It must help him spell out the meaning of his experiences and their truths. (The Sacred Congregation for Catholic Education, 1977, para. 27)
Pope Benedict XVI (2006) adds: “Authentic communication demands principled courage and resolve. It requires a determination of those working in the media not to wilt under the weight of so much information nor even to be content with partial or provisional truths. Instead it necessitates both seeking and transmitting what is the ultimate foundation and meaning of human, personal and social existence. In this way the media can contribute constructively to the propagation of all that is good and true” (para. 2). This is one media technology key that specifically pays attention to the content. The principle that undergirds and guides the communicator-educator in creating and conveying media technology content is fundamentally to be careful to not be moralists (Pontifical councils, 1971, para. 55), but to impart the truth fully and faithfully.

But how does one find truth in the various media technology products and presentations? To put things in more exacting context, how would a teacher proactively teach or respond to a young student asking how to recognize or find truth (or good) in the media? *Quid est veritas*? The question is laden and the answer is not as simple as it might first appear. Perhaps it is debatable how much of a controlled environment the young student (how young?) might need, but the practice of implementing such training wheels at the initial stages is likely necessary. After all, you would not speak to a child in the same way that you would an adult. The goal or *solution*, however, is not so much censorship as preparing the student for what happens when the flood gates open and the student is thrust into the greater world, as per the scriptural call to be in the world. I would propose that the answer lies in being an example in one’s own media technology engagement (e.g., John Paul II, 2004, para. 5), using this seven keys framework, and
teaching students to ask the unasked questions as one engages media technologies. A form of Socratic questioning with the vision that one might use the seven keys framework itself to ask whether the media technology form is balanced. Or whether it upholds the human person. Or what the intention (attitude) of the person(s) who created the media technology is. What are they hoping to sell? And so on. Questions that reflect the reality of the reality-truth that we are immersed in. The Catholic worldview is that God promises that if we continue to seek the truth, in His love for us, He will not hide that truth from us (e.g., Luke 11:9-10, New American Bible). Thus, the object is to convey to students the love for truth, and to communicate the spirit of always seeking and asking in order to find that truth.

***Inspires: Infusing, Enkindling, and Arousing the Mind***

“Communication in any form must always be inspired by the ethical criterion of respect for the truth and for the dignity of the human person” (John Paul II, 2004, para. 2). The etymology of the word ‘inspire’ refers directly to ‘breath’ or ‘spirit’. The semantic range of the word also includes ‘Holy Spirit’. As such, media technology, when ordered properly to its value and purpose, inspires and motivates reflection, thought, and action toward learning and toward the practice of virtues. Media technology sensory experiences – visual, audio, text – may be oriented to capture our attention, enkindle authentic interest in the subject, infuse convictions of relevance, and arouse curiosity in pursuit of deeper learning. For example, learning only the skills, becoming extremely proficient at the techniques would not necessarily lead to the creation of stories and of media that inspire justice or the virtues of hope and charity, let alone faith and
community. For instance, even on a simplistic level, you can probably think of many examples of movies and many more examples of video games that are effects laden and whose editing and execution are faultless, but whose narrative experiences disappoint. Indeed, to inspire also presupposes a personal lived experience and conviction of the messages and lessons being presented: “the power to inspire [is] in the measure in which they are competently presented by professionals themselves deeply convinced of them in their own souls” (John Paul II, 1989, para. 7).

Skill Development: Embracing the Craft and Carrying the Cross

Professionalism is one of the most important characteristics in the identity of every lay Catholic. The first requirement is…the acquisition of a solid professional formation….However, it is not enough that the initial training be at a good level; this must be maintained and deepened, always bringing it up to date. (The Sacred Congregation for Catholic Education, 1982, para. 27)

‘Real world education’, ‘industry training’, ‘workforce preparedness’ – terms such as these are being brandished by many schools in their advertisements to attract students. Indeed the attractiveness of such education is the skill set that one gains in preparation for a competitive workforce. Yet, from the Catholic worldview, the reality of ‘real world’ education is that it is simply not real enough. The reality is that any job skill is not the end in and of itself, and so the education that only has techne or skill training does not go deep enough. The reality is that an informed heart and mind is needed to direct the skills. The reality is that Catholic education remains a bastion for those who believe that media technology skills training must necessarily exist beside education in
the humanities, theology, and philosophy, in the connectedness of knowledge, and in the strong, synergistic relationships that exist between disciplines, in a universal and total education of the human person (cf. The Sacred Congregation for Catholic Education, 1977, para. 35). In this sense, Catholic education requires more from its students. It requires that the heart and mind be developed conscientiously, and it requires that skill sets be learned, studied, and honed to such a high degree that it gives honor and glory to God. In a general educative sense, a Catholic student must be versed in what it means to be human, with a sense of telos, an awareness of communion with other human beings, and a proper respect and responsibility toward God’s creation. This is the training of the heart and mind. At the same time, a Catholic student must undertake preparation in a skill for which one is inclined to and for which one can live by. This training of the hands, as it were, needs both discernment and disciplined rigor. For example, a Catholic media technology professional can neither be solely Catholic nor solely a professional. Submitting sub-standard work that is morally based and full of moral beauty does not excuse the Catholic student from the shoddiness or at best, mediocrity of the form of the work. Submitting a well crafted and professional but morally damaging piece does not excuse the student from the irresponsibility of its content. Both skill and faith development are needed and there is no alternative. Catholic Christians, by their own scriptural definition, accept the cross as part and parcel of accepting the call to be a Catholic Christian. Catholic students accept the responsibility of informing, forming, and nurturing the intellect and conscience over and above the responsibility of studying the
skills for their choice of profession. It is part of the Catholic student’s cross, as it were. That is the reality.

*Motivated By and Relevant to Experience: SEEs; Ordered to Reality*

Experience is important to authentic learning (Trifonas & Ghiraldelli, 2004, p.141). We see this wisdom in the writings of eminent twentieth century educational philosophers like John Dewey (1938, 1973a, 1973b) and Jacques Maritain (1943; Gallagher & Gallagher, 1962). Dewey, who was proclaimed as “the most profound and complete expression of American genius” (Eastman, 1941, p. 671; see also Berube, 2000, p. 33), had a view of experience as a requisite for education that included the moral, social, and cultural dimensions (p. 40; see also Halliburton, 1997, p. 26 – 29). “Education in order to accomplish its ends both for the individual learner and for society must be based upon experience” (Dewey, 1938, p. 89), he would say, “for [experience] influences the formation of attitudes of desire and purpose” (p. 39). At the same time, Dewey is careful to observe that

The belief that all genuine education comes about through experience does not mean that all experiences are genuinely or equally educative. Experience and education cannot be directly equated to each other. For some experiences are mis-educative. (p. 25)

Maritain shared a similar view of the necessity for authentic experiences in education: “like John Dewey, he also repudiates the kind of contemplation and leisure which consists in the epicurean enjoyment that a ‘cultivated’ spectator might derive from observing the spectacle of life” (Gallagher & Gallagher, 1962, p. 12). However,
Maritain’s beliefs about education went further in also advocating the distinctive Catholic worldview that is at once both a “personalist and humanist philosophy of education and of culture” (p. 23). As such, he is careful about “basing education solely on practical experience. With regard to this, we may say that, while practical experience is indispensable, it is unintelligible except in the light of the principles that direct it” (p. 40).

Evidently, care must be taken in ascertaining that appropriate experiences are indeed suitable for education. We might ask, for example, how does media technology provide such an experience and how do such experiences contribute to or aid learning? Or even, more simply, what constitutes an educative experience?

To answer these questions, we begin by inviting the wisdom of the late Monsignor Luigi Giussani (see Appendix A), who at his funeral mass on February 24, 2005, was notably distinguished by both Pope John Paul II and the then Cardinal Ratzinger as having devoted himself to education and “the formation of students needing points of reference and models for inspiration” (John Paul II, 2005b, para. 3). Giussani was the founder of the ecclesial movement of Communion and Liberation, which seeks to make the “‘companionship’ of Christ” (para. 3) an experience of a real, present, and lived encounter with God. In his text *The Risk of Education: Discovering Our Ultimate Destiny*, Giussani (1995) presents education, through the teachings of the Jesuit theologian Josef Jungmann, as an introduction into all of reality:

> The word ‘reality’ is to the word ‘education’ like destination is to a journey. The whole meaning of the human journey lies in its destination, and the destination is present not only in the actual moment that the journey ends, but along each step of
Similarly, *reality* defines and structures each step of the educational journey and is at the same time its final destination, its achievement. (p. 50)

This “*total reality*” calls for the education of the whole human being whereby the “students’ experience of life tends toward total awareness. The result of such an educational process may be called culture” (p. 133). Giussani then defines culture as the “critical, systematic development of an experience” and concludes that “an experience is an event that opens us up to the totality of reality: experience always implies a comparison between what one feels and what one believes to be the ultimate ideal or meaning” (p. 133). He proffers:

Inspiring the student in the direction of a certain worldview without helping him to transfer it into use in the real life will lead the student to develop what is at best an intellectual curiosity and an abstract appreciation for those ideas. This, regrettably, will translate into a sort of sentimental traditionalism, preserved by that sense of appreciation, but will not solidify it into a conviction. In contrast, an educational method that watchfully accepts the risk of a teenager’s freedom is really a source of deliberate faithfulness and devotion to the worldview that is being offered and to those who offer it. (p. 83)

Following this logic, true education requires that a student, at some point in the educational journey, confront all that is experienced as a problem that needs to be critically examined. Without these actions, what has been taught will either be irrationally rejected or irrationally accepted, but will never mature (p. 9). Perhaps this explains why some reject the teachings of the faith when they are older, or alternatively, why some
accept the teachings with a fanaticism that precludes reasonable discussion. Take a look at a Zenit (2005f) report on Giussani’s book *The Risk of Education*:

> “Today we are before a profound crisis of the human, endorsed by the passivity of so many young people and the skepticism of many adults,” said Father Julián Carrón, who succeeded Monsignor Giussani in the presidency of Communion and Liberation ecclesial movement. “Catholic schools leave no mark in life, no lasting trace.” (para. 2) [Giussani’s] book presents in a systematic and critical way the principles of an educational proposal based on the communication of a tradition. The objective is to liberate young people and enable them to evaluate things critically. (para. 8)

Consider for a moment, the way experience is conventionally understood in contemporary educational literature:

Learning is the process whereby knowledge is created through the transformation of experience. This definition emphasizes several critical aspects of the learning process as viewed from the experiential perspective. First is the emphasis on the process of adaptation and learning as opposed to content or outcomes. Second is that knowledge is a transformation process, being continuously created and recreated, not an independent entity to be acquired or transmitted. Third, learning transforms experience in both its objective and subjective forms. (Kolb, 1984, p. 38)

Contrast this view with Giussani’s ‘experience’ as discovering the objective meaning of reality, and one begins to understand that Giussani’s educational philosophy
is a specific understanding of the role of experience that is markedly different and much richer. Recall, too, that a delicate balance must be struck “between human experience and understanding” (Miller, 2005, section 4.1, para. 1). Without understanding, experience fails to give meaning. In summary, to experience something through the lens of a Catholic worldview is to seek to understand its meaning and its objective truth as properly interconnected to all of reality, and to discover how it serves society and the human person: “Created things have their own laws and values which are to be gradually discovered, utilized and ordered by man” (John Paul II, 1993; see also Vatican II, 1965b; Liberia Editrice Vaticana, 1997, para. 898).

With this understanding of experience, we can go further along on our journey to define the form of experience that is proper to media technology, to what I earlier called sensory-experiential events (SEEs). I had proposed that SEEs, when used appropriately, can be a most powerful ally to learning. Specifically, I suggested that media technologies are ordered towards sensory experiences and if improperly used, can instead become a distraction to learning. In this seventh key, our concerns for media technology use in education are thus to consider whether our applications of media technologies are ordered toward SEEs, whether they are relevant and made relevant to the experiences of the learners in understanding a total reality, and whether the learners are assisted in discerning the role that the media technologies themselves play as ordered toward serving the community and the human person.

In journeying forward, the concepts and applications of SEEs as well as the seven media technology engagement keys can and should be further validated by additional
testing in other disciplines, by exploring a wide range of variables, and by researching in diverse environments. This framework is just the beginning of the journey and these policies comprise the compass that I am offering. I invite you to journey forward with this compass as guide. Media technology is primarily in the domain of the sensory-experiential. Thus, we can more precisely say that the prudent application of media technology in education is motivated by whether the educator desires to provide the students with sensory-experiential events, and whether these SEEs are relevant to the experiences that the students have or share. Ultimately, the experiences ought to engage students to wrestle with their own life and the meanings therein. For Catholics, this is an engagement, and thus a relationship with Jesus Christ, who is the experience – the experience of God present to us.
CHAPTER III

TOWARD A CATECHESIS FOR USING MEDIA TECHNOLOGIES IN CATHOLIC EDUCATION

A catechism, from a basic definition, is a summary of fundamental teaching that is expounded in question and answer form. By this description, this chapter moves us towards a catechism for Catholic media technology engagement (cf. Pontifical councils, 1992, para. 8; see also, Pontifical councils, 2002a, para. 9). It functions to help orient one towards the seven keys framework derived in chapter two. This seven keys framework is precisely that: a structure and a foundation created to support further development. The ultimate goal is to invite you to start using and to build upon this framework as needed. This is directed especially toward Catholic educators who grapple with integrating media technologies in Catholic education. The call for you is to further reflect on the implications and usability of the seven keys framework adapted to your own instructional technology needs and circumstances.

Moreover, almost as a reminder to the reader that a dissertation is inherently written in a literate, sequential form that is not sensory-experiential as we have defined it, this ‘frequently asked questions’ segment is an allusion to the FAQ sections that one finds on numerous websites. Websites represent the post-literate combined with the sensory-experiential, and so for example, the in-text citations to the references found in this dissertation would probably become hyperlinks on a website. Since this dissertation deals with a sensory-experience of media technologies, I thought it apt to include an FAQ section both to attend to clarifying questions as well as to revisit the seven keys media-
sense framework from additional angles necessary to realize any authentic discussion of media technology engagement. The questions addressed here were raised in several verbal discussions that I had with colleagues and others from when I first conceived of the seven keys to before the completion of this dissertation.


The word ‘integrated’ was chosen because this work integrates (a) what the Catholic Church has explored in issues of media technology and how it relates to education; and (b) what a number of profound, modern Catholic thinkers have written about the nature of media technology and how it affects the human condition. The interweaving of these two threads is the focus of this dissertation. The integrated direction for Catholic media technology engagement is the conceptual framework of the seven keys presented in chapter two and applied in chapter four of this dissertation.

A conceptual framework is a fundamental system of concepts that is used to engage or support more complex processes. As I carefully examined various disparate parts (or constructs), I found that they logically and naturally fit together to form a unified structure, which is this framework. The process of examining the constructs was much like examining the pieces of a jigsaw puzzle, only that in this case, some pieces from other boxes may have been thrown in the mix. Some groups of already connected pieces formed a partial picture, while other pieces were still solitary and had to be inspected from various angles to determine if there could be a proper fit. The final
framework-picture comprises the seven keys of Catholic media technology engagement. It also meets the need for a new kind of instrument and way of thinking:

Multimedia is a new medium and quality products will cease to exist until the authors and publishers understand this. When I look at a simple transcription into the new medium from the old, I feel that McLuhan died for our sins. It is time to atone for past transgressions and to realize that the world of interactive multimedia is completely different from anything we have worked with before.

(Thornburg, n.d.)

We are still young enough in this new primary media technology age that it is difficult not to use the thinking of the literate age as a point of departure or comparison for any new media technologies. The seven keys framework is a structure for a new way to think and functions as a new kind of instrument because it recognizes both the return to the sensory-experiential of the primary oral culture and the lineal thinking influences of the primary but now post-literate culture. Additionally, it might be helpful to think of the framework as a scaffold with which to categorize and ‘hang’ information and experiences that you may gather as you journey through daily life engaging media technologies from this point on.

Does This Conceptual Framework Improve Educational Practice In The Field of Instructional Technology? Does This Framework Improve The Delivery of Instructional Technology In Education?

Yes it does, on both counts. The difficulty in proposing a framework of this nature is that it deals with principles and precepts that are not generally found in non-theological
modern academic and scholarly literature, namely, concepts that are at the focused
intersection of faith, media technology, and educational practice. And as if that is not
enough, there are the words ‘God’, ‘Jesus Christ’, and ‘Holy Spirit’ used as appropriate,
but interspersed throughout the document. However, set this notion aside for a moment
and consider the case of a researcher who is seeking to study and assist a people of a
different culture. The researcher necessarily takes the culture’s uniqueness into account in
the analysis, reflecting and seeking to understand social values, practices, and
communication structures (for example, Kemmis, 2004, p. 92; Kemmis & McTaggart,
media technology engagement, why should the Catholic culture be treated any
differently? The fact remains that this framework is internally consistent, that is, given
the definitions and worldview of Catholic culture, given the findings of modern thought,
research, and studies, such a framework is a natural and logical construct that emerges.
Likewise, the model lesson presented in chapter four is an instructional design template
that naturally and logically derives from the framework. Consistency is consciously and
conscientiously maintained throughout the process of concept integration and framework
construction. Additionally, with a similar outlook to that which Culp, Honey, &
Spielvogel (2003) proposed in their text *Evaluating Educational Technology: Effective
Research Designs for Improving Learning*, attention was paid to “achieving local
relevance and broader influence” rather than placing a direct emphasis on maximizing
generalizability (p. 78). For us here, this means that the seven keys framework first and
foremost needs to be authentic to the Catholic culture’s worldview of education and
media technology integration (local relevance), and at the same time it must be useful to the wider population of Catholics throughout the world who engage media technologies (broader influence). The added benefit here of subscribing to the Catholic worldview that all human beings are created in the image and likeness of God and thus share the same fundamental qualities of humanity, is that because of the seven keys framework’s grounding on this Catholic worldview, generalizability to all persons is also part and parcel of the equation. So does this framework improve educational practice in the field of media technology? It does because with a structure that has been tailored to this specific culture, this specific worldview, Catholics have a customized instrument with which to ‘measure’ media technology applicability in education. And with a way to measure (or assess and evaluate) media technology applicability in education, Catholics educators also have a personalized way to improve the delivery of instructional technology in education.

What Are Some Differences Between The Catholic and Secular Worldviews of Education?

Worldviews can be seen in definitions, but with so many definitions of education, perhaps logically speaking then, each of these definitions must be incomplete. Nevertheless, a sampling of definitions of education include the following, starting with the Oxford English Dictionary:

The systematic instruction, schooling or training given to the young in preparation for the work of life; by extension, similar instruction or training obtained in adult age. Also, the whole course of scholastic instruction which a person has received.
Often with limiting words denoting the nature or the predominant subject of the instruction or kind of life for which it prepares, as classical, legal, medical, technical, commercial, art education. (Oxford English Dictionary, n.d.)

Other definitions include: “prepare students to use their skills to solve real world problems” (Chen, 2003, p. 17); Atkins (1995) proposes four goals of higher education: (a) general educational experience which has intrinsic worth in its own right; (b) train students to create, apply, and disseminate knowledge; (c) prepare students for specific professions in the workforce; and (d) prepare students for general employment; Allan (1996) describes the goal of higher education in terms of learning outcomes that are classified into subject-based, personal-transferable, and generic academic outcomes. Subject-based outcomes are specific to the discipline, while personal-transferable and generic academic outcomes are a sort of catch-all that include critical thinking, using information, teamwork, and communication skills.

To further outline a secular worldview, look at the purposes of education as delineated by six questions that Heinecke, Milman, Washington, & Blasi (2001) propose in their article *Instruments for Assessing the Impact of Technology in Education*:

1. Is it to provide training in fundamental and basic skills?
2. Is it to prepare students for the work force?
3. Is it to produce citizens for an effective democracy?
4. Is it to produce an equitable society?
5. Is it to produce life-long learners?
Is it to prepare students with critical thinking skills for a complex new world? (p. 102; see also Heinecke, Blasi, Milman, & Washington, 1999, para. 14)

Howard Gardner (1994), the educational reformer who first defined the list of multiple intelligences, asserts: “In my work, I have argued very strongly that the purpose of education is to increase understanding. Understanding means that you can take knowledge, facts, concepts, and apply them in new situations -- situations you haven't already been coached on” (para. 1). These diverse definitions begin to describe a contemporary secular worldview of education.

The Catholic worldview holds that “what is true of education in general is especially true of Christian education” (Gallagher & Gallagher, 1962, p. 137) simply because all truth comes from God. Compare the above secular views with the additional precepts that the Catholic worldview of education holds:

1. Affirming professionalism and truths found in the general developments and discoveries:
   
The Church esteems highly and seeks to penetrate and ennoble with her own spirit also other aids which belong to the general heritage of man and which are of great influence in forming souls and molding men, such as the media of communication” (John Paul II, 1965c, para. 4); They should therefore be very carefully prepared so that both in secular and religious knowledge they are equipped with suitable qualifications and also with a pedagogical skill that is in keeping with the findings of the contemporary world. (para. 8)
2. Educating the whole person and therefore recognizing the dignity of each human person as well as the dimension of faith that is directed toward the reality of the sanctified and Eucharistic life in Jesus Christ:

It is one of the formal tasks of a school, as an institution for education, to draw out the ethical dimension for the precise purpose of arousing the individual's inner spiritual dynamism and to aid his achieving that moral freedom which complements the psychological. Behind this moral freedom, however, stand those absolute values which alone give meaning and value to human life. (The Sacred Congregation for Catholic Education, 1977, para. 30) The Catholic school is committed thus to the development of the whole man, since in Christ, the perfect man, all human values find their fulfillment and unity. (para. 35; see also para. 29)

3. Embracing a communal dimension (including missionary and responsibility to service) founded on the concept of koinonia – a point of departure for Christian thinking about ethics – that is the world of a community called into being by the action of Jesus Christ:

The Catholic school, far more than any other, must be a community whose aim is the transmission of values for living. Its work is seen as promoting a faith-relationship with Christ in Whom all values find fulfillment. But faith is principally assimilated through contact with people whose daily life bears witness to it. Christian faith, in fact, is born and grows inside a community. (The Sacred Congregation for Catholic Education, 1977, para. 53)
Roman Catholics are indeed a peculiar people. They are called to be actively a part of the world and to be present to the age they live in, but at the same time, their apostle St Paul exhorts: “Do not conform yourself to this age but be transformed by the renewal of your mind, that you may discern what is the will of God, what is good and pleasing and perfect” (Romans 12:2, New American Bible). Education forms an integral part of the renewal of the mind and the transformation of the human person. But it must be an education that touches the whole person, and acknowledges the mystery in history, the certainty of God becoming man in the person of Jesus Christ present to us today in a Eucharistic reality:

The integral formation of the human person, which is the purpose of education, includes the development of all the human faculties of the students, together with preparation for professional life, formation of ethical and social awareness, becoming aware of the transcendental, and religious education. Every school, and every educator in the school, ought to be striving “to form strong and responsible individuals, who are capable of making free and correct choices”, thus preparing young people “to open themselves more and more to reality, and to form in themselves a clear idea of the meaning of life”. (The Sacred Congregation for Catholic Education, 1982, para. 17; see also Miller, 2005, section 4 para. 1; The Sacred Congregation for Catholic Education, 1977, para. 31; The Sacred Congregation for Catholic Education, 1988, para. 99)

Without an education of the total person, we limit ourselves, and we are not as free as we are truly created to be.
Do You See A Difference Between Experiential Learning As Described In Many Contemporary Texts and The Sensory-Experiential Events (SEEs) You Described?

Yes, I do. While a general meaning of experiential learning is difficult to pin down (Beard & Wilson, 2002, p. 13), experiential learning in many contemporary texts refers to learning as “a continuous process in which knowledge is created by transforming experience into existing cognitive frameworks, thus changing the way a person thinks and behaves. A program using experiential learning theory focuses on the learner and structures experiences to accommodate different learning styles” (Sewchuk, 2005, p. 1311; see also Kolb, 1984, p. 38); “observable attributes (the physical surroundings, sentient beings, objects, systems and events that occur) and the non-observable perceptions of the learners (the engagement, cognition and affective responses)” (Appelman, 2005, p. 64); “[requiring] more than just ‘having’ experiences. It requires openness to new experience and tolerance for ambiguity so that the complex reconstructive-methodic process may occur” (Hopkins, 1994, p. 95). And because “it is only by considering what we mean by experience that as trainers, educators and developers of human potential we can gain insight into one of the most powerful means to learning that currently exists” (Beard & Wilson, 2002, p. 15), that the distinction here is made for the specific sensory (physical sense possibly leading to emotional appeal) dimension, which is what SEEs specifically target as the primary mode of experience for media technology. As a side note, if we consider the many practical materials in the Montessori framework for education as media, then we see again the sensorial nature at work in educative media technologies (Hainstock, 1997, p. 47; Lillard, 2005, p. 322;
Lillard & Jessen, 2003, p. 5, 184; Tepper-Rasmussen, 2004, p. 27). So, I come back to the simple proposal that if the educator’s goal is to conduct a discursive debate and discussion, media technology may result in unnecessary distractions. But if the educator’s goal is to provide a sensory-experience, then the use of media technology is not only apt, but it is the primary way to create that experience in our age. My intention is not to dichotomize the sensory-experiential and the lineal discursive thinking, but to suggest that media technology favors a specific form of learning. (By the way, my use of the word ‘discursive’ refers not to the meaning of a rambling conversation which departs from the main topic discussed, but rather to the definition used in philosophy of proceeding to a conclusion by reasoned argument.)

I would further suggest that we look at the macroscopic view of the three ages of primary oral, literate, and electronic (media technology) to employ on a microscopic level. In other words, we could be employing the different forms of learning – experiential, discursive, and sensory-experiential – at different points in a lesson. For example, starting out with a simple video clip that engages interest and sets the stage for the reasoned and lineal discussion portion of the lesson, then finishing the lesson with an application of the discussion through an interactive project that is created using one or more forms of media technology. Perhaps media technology, viewed through the lens of SEE,s, are a sign to point us to the experience of the reality of our lives. In this sense, maybe after watching a TV program or playing a computer game that was particularly immersive and thoughtful, we ought to see a screen, if only as a visual reminder, that says
something to the effect of “Please turn me off now and go reflect on what you have experienced”.

Do You See A Difference Between Contemporary Constructivist Learning Approaches and The Engagement of Media Technologies As Proposed By The Seven Keys?

To an extent, yes I do. A brief overview of constructivism is presented here in order to juxtapose with the Catholic worldview of the seven media technology engagement keys. As a sort of contrast to a behaviorist, didactic, teacher-focused approach, contemporary constructivist approaches to learning comprise a broad range of schools of thought, though they primarily refer to a premise that considers learning (or cognition) as the result of actively building (or constructing) new information on prior understanding (Fosnot, 2005; Laurillard, 2002, p. 67). This process of constructing one’s own meaningful understanding also tends to suggest a learner-centered approach (Mayer, 2001, p. 10 – 12). The roots of cognitive construction of knowledge can be traced back to the Neapolitan philosopher Giambattista Vico who wrote a treatise in 1710 on knowledge as cognitive structures that student puts together (Yager, 2000, p. 44). The constructivist notion can also be seen in the dictum that is attributed to Confucius: Tell me, I’ll forget. Show me, I’ll remember. Involve me, I’ll understand. Regarding teaching and learning models within constructivism, the North Central Regional Educational Laboratory (n.d.) proposes: “constructivists believe that learning is affected by the context in which an idea is taught as well as by students' beliefs and attitudes. Constructivist teaching is based on recent research about the human brain and what is known about how learning occurs”
The article cites Caine and Caine to suggest that “brain-compatible teaching” is based on 12 principles:

1. "The brain is a parallel processor" (p. 80). It simultaneously processes many different types of information, including thoughts, emotions, and cultural knowledge. Effective teaching employs a variety of learning strategies.
2. "Learning engages the entire physiology" (p. 80). Teachers can't address just the intellect.
3. "The search for meaning is innate" (p. 81). Effective teaching recognizes that meaning is personal and unique, and that students' understandings are based on their own unique experiences.
4. "The search for meaning occurs through 'patterning'" (p. 81). Effective teaching connects isolated ideas and information with global concepts and themes.
5. "Emotions are critical to patterning" (p. 82). Learning is influenced by emotions, feelings, and attitudes.
6. "The brain processes parts and wholes simultaneously" (p. 83). People have difficulty learning when either parts or wholes are overlooked.
7. "Learning involves both focused attention and peripheral perception" (p. 83). Learning is influenced by the environment, culture, and climate.
8. "Learning always involves conscious and unconscious processes" (p. 84). Students need time to process 'how' as well as 'what' they've learned.
9. "We have at least two different types of memory: a spatial memory system, and a set of systems for rote learning" (p. 85). Teaching that heavily emphasizes rote learning does not promote spatial, experienced learning and can inhibit understanding.

10. "We understand and remember best when facts and skills are embedded in natural, spatial memory" (p. 86). Experiential learning is most effective.

11. "Learning is enhanced by challenge and inhibited by threat" (p. 86). The classroom climate should be challenging but not threatening to students.

12. "Each brain is unique" (p. 87). Teaching must be multifaceted to allow students to express preferences.

The Catholic worldview of media technology engagement necessarily goes deeper on many of these concepts. For example, “effective teaching connects isolated ideas and information with global concepts and themes” (para. 3) if taken further would lead to the truth that the precept of knowing an object of study is to understand its ordered relationship to an objective reality as created by God.

The Montessori practice of education also affirms a construction of meaning “not only of a particular type of teaching and learning but of a particular type of living” (Cossentino, 2005, p. 212). “The practice of Montessori education entails a participation in a highly coherent and deeply textured culture” (p. 212). Connections are made across the curriculum, and interest is built on prior knowledge (Lillard, 2005, p. 142). With a balance between the didactic and constructivist methods in education, and a strong focus
on directing these methods to the benefit of the individual student, Pope John XXIII is
quoted as saying this of Maria Montessori:

It is possible to see a clear analogy between the mission of the Shepherd of the
Church and that of the prudent and generous educator in the Montessori methods,
who with tenderness, with love and with a wise evaluation of gifts, knows how to
discover and bring to light the most hidden virtues and capacities of the child.
(Standing, 1965, p. v)

In fact, when constructivism is “based on the assumption that students work to
build their knowledge as individuals; therefore each student must be assisted somewhat
differently” (Coppola, 2004, p. 137), then this constructivist quality falls in the domain of
the personal dimension of the seven keys framework. Thus, while the seven keys are
focused on media technology engagement, because some constructivist features are
grounded on truths of who we are as human beings, many of the facets of constructivist
learning as expounded above corroborate and may also be built upon the seven keys
framework. This is not surprising since the keys are foundational and grounded on a
fullness of reality, and any truths are necessarily built upon this reality:

For by the very circumstance of their having been created, all things are endowed
with their own stability, truth, goodness, proper laws and order. Man must respect
these as he isolates them by the appropriate methods of the individual sciences or
arts. Therefore if methodical investigation within every branch of learning is
carried out in a genuinely scientific manner and in accord with moral norms, it
never truly conflicts with faith, for earthly matters and the concerns of faith derive
from the same God. (Vatican II, 1965b, para. 36; see also Gallagher & Gallagher, 1962, p. 137)

However, constructivists may also assert that “knowledge or truth is subjective and relative to the individual or community” (Carson, 2005, p. 232) or that “the basis for accepting what is real and independent of our cognitions is dependent upon social consensus” (Elkind, 2005, p. 328), with social consensus being the objective standard (p. 331). When statements like “true knowledge, therefore, cannot come from the faculty of reason alone, but only from social consensus as to the truth of the reasoning process” (p. 330) are made without consideration for concupiscence which darkens the intellect, weakens the will, and disorders the appetite (John Paul II, 1993, para. 1; see also Liberia Editrice Vaticana, 1997, para. 405, 978), then following social consensus runs the distinct danger of ‘having the blind lead the blind’. And as if that cliché is not enough, society also has another aphorism that says ‘only dead fish flow with the stream’. If these precepts were the basis for a constructivist learning model, then the Catholic worldview is at odds. So, to the extent that Catholics adopt certain features of a ‘moderate’ form of constructivism, then the constructivist approach and the seven keys potentially share common roots. But to the extent that constructivism adopts a relativistic view whereby an objective reality and truth that can be taught with certitude (for example, Liberia Editrice Vaticana, 1997, para. 890; Miller, 2005, section 4.1 para. 3; Vatican II, 1965a, para. 6) is ignored or rejected, then the constructivist approach to learning differs greatly from the seven keys of media technology engagement.
Do You See Constructs Like Bloom’s Taxonomy and Gardner’s Multiple Intelligences As Still Useful Within the Framework of The Seven Media Technology Engagement Keys?

Yes, I do. Bloom’s taxonomy is a classification of thinking behaviors thought to be important to the process of learning. These thinking behaviors include knowledge, comprehension, application, analysis, synthesis, and evaluation (Bloom et al., 1956; see also Anderson & Krathwohl, 2001). The assumption made is that these thinking behaviors exist on a continuum that ranges from basic to complex. Verbs are associated with each thinking behavior; for example, ‘define’ or ‘list’ might be verbs for knowledge, while ‘analyze’ or ‘compare’ might be verbs for analysis.

On the other hand, Gardner’s original multiple intelligences (MI) proposes that instead of one IQ number to represent intelligence, that there are seven types of intelligences: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, intrapersonal, and interpersonal (Gardner, 1983). Since then, Gardner (1999) has toyed with ‘spiritual’, ‘moral’, and ‘existential’ intelligences, but only ‘naturalist intelligence’ which enables human beings to recognize, categorize, and draw upon features of the environment (p. 48) – for example, people who learn best through field trips, outdoor activities, and interactions with plants and animals – merited addition to the original list of seven intelligences (p. 52). The multi-sensory, and therefore, multi-intelligence approach to learning that media technologies are equipped to handle allow for lessons that can potentially engage a large number of students. Each student can be taught the lesson using the particular media form that best matches his or her particular set of
intelligences. Alternatively, students can take MI quizzes that indicate which form of intelligence(s) they may most successfully learn within. Using this knowledge, the student can use the flexibility of media technologies to choose the favored form(s) of learning. Because the seven media technology engagement keys operate at a more elemental level than either of these constructs, these constructs may be built upon the keys. I would submit that the seven keys can provide a better, more integrated take on the ideas that are modeled in MI. So, for example, technology used in the way described with MI actually builds from the key that technology must be personalized to the individual human person. Or a lesson that has students using the interactive functionality of media technology to link different file types in order to synthesize their diverse findings from across disciplines in fact develops from the policy of balance whereby a *katholikos*, a holistic vision, or study of the connectedness of the parts is needed. Indeed, to an appropriate extent, I have utilized both constructs in the instructional design template that I describe in chapter four of this dissertation.

**Why Did You Begin This Journey? What Motivated You In The First Place?**

There are several motivating factors. For one, the Catholic Church has explored issues of media technology and how it relates to education. At the same time, a number of profound Catholic thinkers have grappled with the nature of media technology and how it affects the human condition. These two threads have been independent of each other. An effective conceptual understanding of the role and meaning of media technology in Catholic education requires us to weave these two threads together to craft an integrated and coherent synthesis. I was trying to connect the dots, to bring the disparate parts
together to create a cohesive and integrated framework that is practical for use in daily life and in education.

Hence, what motivated me was my own struggle with wanting to engage media technologies in ways that are authentic to the truths of life, truths as revealed in scripture and the magisterial documents. There were also the complaints that I heard time and again at conferences and in informal discussions about faith and media technologies and how the two are seemingly at odds. Unfortunately, I felt that these discussions were largely negative criticisms without much energy directed toward finding solutions. Many conversations would invariably lead to someone asking me for guiding principles for how they could apply, explain, or even reject media technology in their daily life, in their professions, or in the trenches of youth ministry. Maybe it was my own lack of knowledge, but I felt frustrated that there was no clear and succinct response that I could give them.

Then there was the tangential thought about Madam Marie Curie’s fixated fascination with radium and how this attraction led her to keep a piece of the radioactive rock in her desk drawer, close to her heart, as it were. She “died of leukemia induced by [her] long exposure to radioactive materials” (Bowden, 2000). Is it not likewise prudent to step back to consider the big picture and deliberate policies for healthy media technology consumption?

Most significantly, there were the communiqués on media technology engagement from John Paul II and the Pontifical Council for Social Communication that were full of realistic idealism and grounded hope that attracted and encouraged me. When
I reflected on the first verse of the gospel of John: “In the beginning was the Word…” (John 1:1, New American Bible), it propelled a train of thought that led me to explore in multiple fields, to read the writings of Chesterton (1908), Maritain (Gallagher & Gallagher, 1962), Dewey (1964), and Giussani (1995), to Innis (1951), McLuhan (1964), Ong (1982), Postman (1985), and Schultze (2002), to name a few. Why was the word ‘Word’ used at a time before the wide spread literacy of the written or printed word was the norm (cf. Postman, 1985, p. 9)? Why not use ‘image’ or some other more familiar term? What is a ‘word’ as we currently understand it? The Oxford English Dictionary defines ‘word’ as a carrier of meaning. So we might say, “In the beginning was the meaning…” Keeping this discussion at a very simplistic level for the purposes of an FAQ, the Greek translation is logos, which in Grecian philosophy refers to a universal view of the world. So, we also have: “In the beginning was the worldview…” Of course, the catechism teaches us that “Word” refers to Jesus Christ, and in a different way, to scripture itself (for example, Liberia Editrice Vaticana, 1997, para. 103). Thus, the second person of the Trinity and scripture are both meaning and worldview. I also discovered other scriptural references that might be understood in a media-sensory-experiential way. For example, part of the first commandment is “You shall not make for yourself a graven image” (Liberia Editrice Vaticana, 1997, 2129-2132; Exodus 20:4, New American Bible). Imagine a modern day system of ethics that tells you to not engrave pictures. Does it not strike one as odd? Seen in this light, the commandment reveals wisdom about the power of images to carve themselves into the mind, or of a powerful connection between symbolic forms and culture. Or take the more positive
rendition of ‘image’: “Jesus is the image of the invisible God” (Colossians 1:15, New American Bible). The incarnation and sacramental give us a concrete experience of the corporeal, immanent, and transcendent. As another example, St John the apostle speaks of the sensory experience with form and matter: “what we have heard, what we have seen with our eyes, what we have looked upon and touched with our hands” (1 John 1:1, New American Bible).

Now, going back to what I had already explained in the seven keys section on motivation, John’s gospel was written at an age when we were still largely an oral (and aural) culture, a culture that experienced the world with the senses all at once. With the invention of the printing press in the fifteenth century, we largely became a literate culture, a culture that was lineal in writing and in thinking. Today, we are in an electronic age with media technology experiences that engage the senses all at once. It is as if we have gone full circle back to the beginning, with the exception that we are also at the same time post-literate. To paraphrase a saying attributed to Mark Twain, history doesn’t necessarily repeat itself, but it sure rhymes. Just as in the literate age, the sensory experience of the electronic age ought to inspire us to an experience of Christ that is relevant to our present condition. In education, we have to consider if we want to have the focus be on a linear discussion or on a sensory experience. Media technology, by the very property of its form, tends to create sensory experiences and tends to not support sequential thinking. This is not to say that one form is better than the other for education. Indeed, both are required and necessary, and would vary in use depending on the lesson, subject, or the circumstance. Now, when someone expresses frustration in trying to
engage her media technology acculturated kids in her parish and asks me for guidelines, I have something practical to suggest and give instead of just feeling bad for her.

Why Seven Keys?

Because when I pulled the concepts together, they came to seven key points. Before even researching the key approaches for Catholics in media technology engagement, I had joked that it would be neat to have seven keys just because seven in Hebrew numerology is the number of perfection; the sacramental perfection of reality, if you will. I then set the notion aside and proceeded with the research and study. As I culled my thoughts and findings, and wove together a single, integrated definition, the teacher in me wanted a mnemonic that would make the concept easy to remember. I listed the key points and it spelled ‘baptism’. While it could have been my subconscious at work, I like to think that it was Our Father’s joke on me. Besides, when He gave us the ten commandments, they were not only applicable to that day and peoples, but for all peoples and for all time: “God graciously arranged that the things He had once revealed for the salvation of all peoples should remain in their entirety, throughout the ages, and be transmitted to all generations.” (Vatican II, 1965a, para. 7; Liberia Editrice Vaticana, 1997, para. 74). I thought that the seven keys looked so simple and obvious after I wrote it out, but then again I am reminded that it is attributed to Einstein who said, “when the solution is simple, God is answering” (Judaism Online, n.d.). What I saw were disparate parts and I set out to put the pieces together into a unified structure. This notion of integration is echoed by Harold Innis (1951), a man who inspired Marshall McLuhan in
many of the concepts of media technologies influencing cultures. Innis proposed that “acquaintance with the writings of Aristotle led to the attempts such as those of St Thomas Aquinas (1227-74) to reconcile classical with Christian teaching. Aristotle as a creator of formal logic could be absorbed in orthodoxy” (p. 52). In a way, the answers were already there. The dots just had to be connected.

Are These Keys Really Practical Throughout All Disciplines?

At a time when epistemology was thought to be systematic and immanent, Peter Ramus or more properly Pierre de la Ramee, an intellectual from the sixteenth century, claimed to have developed a method to represent thought in a spatial form (Ong, 1958). Translation: imagine someone saying to you that the concepts you have in your mind can be represented on a piece of paper. What Ramus developed is fundamentally the genesis of a tree diagram or an organizational chart that we are so familiar with today. (Did it ever occur to you to wonder who initiated the concept of tree diagrams?) The significance of Ramus’ work is the ability to represent and preserve logic and thought in the spatial medium of paper. His diagrammatic thinking was a sort of universal logic that was applicable to all subjects, not because of its brilliance so much as its simplicity and its elementary nature. So are these keys practical throughout all disciplines? I think so because the more elementary something is, the more likelihood that it is shared by multiple higher forms. I hope the keys will also prove practical for engaging media technologies in daily life – ‘practical’ as ordered to (a) the truth of who we are as human beings, and (b) ordered to applying the truths to daily practices of life’s events. I believe that I have only skimmed the surface with regard to the depth and circumstances that
each key can unlock and free in media technology engagement. I hope interdisciplinary dialog, empirical studies as well as experience and research that bridge the various fields of inquiry will continue to engage these policies in order to elaborate, test, and further build up this framework. In the spirit of collective rethinking, I invite Catholics to take up the discourse and journey forward. In setting forth this framework as aid, I hope to spark further practical endeavors to reclaim media technology as gift from God.

Is There A Consequence To Not Adopting A Framework For Engaging Media Technologies? Where Are We Headed If We Do Not Adopt A Framework For Engaging Media Technologies?

“How can a great and wise civilization have destroyed itself so completely?”

“Perhaps,” said Apollo, “by being materially great and materially wise, and nothing else.” (Miller, 1959, p. 129)

Walter Miller’s unique and classic science fiction novel *A Canticle for Leibowitz* explores the unusual angle of the Catholic Church in the far-off future. True to form, the Catholic Church remains the bastion of knowledge, wisdom, stability and hope in a world that has chosen to go through cycle after cycle of turmoil and war. But the insightful observations remain: “Neither infinite power nor infinite wisdom could bestow godhead upon men. For that there would have to be infinite love as well” (p. 238)

Perhaps the above excerpts are too dire in tone, but I believe that there are serious consequences to Catholic educators not adopting a Catholic worldview and framework in integrating media technologies in education. In his book *Communicating for Life: Christian Stewardship in Community and Media*, Schultze (2000) submits that the Tower
of Babel (Genesis 11:5, New American Bible) was a well organized technological structure and “community fueled by selfish ambition” (p. 79). In the Genesis account, the growth of Babel’s institutionalized evil was retarded when the Tower was destroyed and the inhabitants scattered throughout the lands because their communication became confused. Can similar consequences, such as the inability to peacefully communicate, be re-enacted in the digital age? Schultze, a professor of communication arts and sciences, contends that discussion or even mention of human sinfulness is typically absent from scholarly discourse in our modern journals (p. 85). Yet, from a Catholic worldview, sin is prevalent and affects the whole human race after the Fall. This logically means that sin affects human communications and the way we use media technology. Failure to recognize this effect of sin as we develop studies, craft methodologies, and define hypotheses is like trying to arrange new deck chairs on the Titanic.

Quo vadis? Where are we headed? Icebergs of sorts, concealed in the dark, loom ahead. Developing new methods or strategies of teaching and learning with media technologies without first examining how it affects the human person could lead to grim consequences on the human condition. This examination of the human person cannot be narrowly limited to only a few disciplines, such as how the brain functions or how we learn, but must encompass the total vision of the human condition. Worldviews that are opposed to Catholic morality and thought can adversely deform and confuse Catholic educational practices. Perhaps many of the misunderstandings surrounding Catholic teaching stem from an improper and inadequate education. If Catholic educators adopt educational practices from secular studies without first examining them under the light of
a Catholic worldview to determine if they are apt and fit for use, then Catholic educational practice runs the genuine risk of becoming nominally Catholic. If Catholics are serious about actively living out their faith in this digital age, then it is incumbent upon them to define for themselves what their beliefs about media technologies are. But how does one determine if a secular practice is good and worth adopting? How does one define the beliefs of media technology engagement? These were motivating questions that prompted the creation of this framework. This framework is an instrument with which to ‘measure’ media technology as seen from a Catholic worldview. It is also a core set of keys that are grounded on the Catholic worldview and that are focused specifically on media technology engagement. You would use the seven keys to determine if a secular practice and philosophy of media technology use is appropriate for adoption in Catholic education. You would also use the seven keys as a basis for defining the Catholic worldview regarding media technologies.

And if you subscribe to the view that all human beings share a common humanity, which is a Catholic vision that all human beings are called to share in the family of God, then anyone can use the seven keys to approach media technologies and education, whether they profess to be Catholic or not.
CHAPTER IV

AN INSTRUCTIONAL TECHNOLOGY DESIGN PROTOTYPE, GROUNDED ON THE SEVEN KEYS FRAMEWORK DERIVED IN CHAPTER TWO, THAT INTEGRATES MEDIA TECHNOLOGY AND CATHOLIC EDUCATION

You might have heard of the adage that there is nothing so theoretical as good practice and nothing so practical as good theory (cf. Gallagher & Gallagher, 1962, p. 10). Theories provide explanations to aid our understanding, which in turn inform our actions. So do policies. The opposite of ‘theoretical’ may not be ‘practical’ so much as ‘applied’. How should we apply the keys of Catholic media technology engagement?

The previous chapter was a catechesis that helped orient one to the seven keys framework, which in turn is founded upon scripture, contemporary Catholic thinkers who have grappled with media technology and its impact on the human condition, and Church documents on education and social communications. In this chapter, we turn the Catholic worldview to the instructional technology conversation, which may also be thought of as a particular orientation or an instructional technology paradigm for the seven keys framework. This chapter thus presents an instructional design plan in which the policies I derived in chapter two naturally lead to the creation of a practical framework and an example lesson plan that integrates media technologies with a Catholic worldview. This is a prototypical lesson plan intended to orient and prepare educators who will integrate media technology in Catholic education. I adopt a more formalized approach, and one that is easily recognized as an instructional design template because of its conventional layout. Specifically, this instructional design plan comprises the following parts:
1. Introduction and situating the question
2. Needs assessment
3. Defining the problem
4. Defining the stakeholders
5. Stating the purpose with objectives and definitions
6. Application of the seven keys of media technology engagement framework
7. Describing the lesson with behaviorally focused learning objectives
8. Understanding the learner characteristics
9. Describing instructional strategies
10. Describing media technologies employed
11. Describing the delivery system
12. Describing pre-, practice, post-tests
13. Formative evaluation strategies
14. Implementation and summative evaluation strategies
15. Next steps (considerations in journeying forward)

These 15 parts are in turn a synthesis of instructional design models that have been widely studied and utilized in the field (e.g., Anagnostopoulo, 2002; Armstrong, 2004). At the same time, many of these same models have implicit shortcomings or simply fail to address the demands that a Catholic vision sets forth (as described by the seven keys framework): “By not addressing culture in the design of instruction, many products have been designed that inadequately address the needs of the population for whom the instruction was designed” (Thomas, Mitchell, & Joseph, 2002, p. 40). As such,
my intention here is to derive a strategy and an idealized prototypical model for Catholic media technology integration, drawing relevant paradigms from various models (Visscher-Voerman & Gustafson, 2004, p. 87).

For example, while ADDIE, a generic and popular model of instructional design (Armstrong, 2004, p. 75; Crawford, 2004, p. 413) whose steps involve a process of Analysis, Design, Development, Implementation, and Evaluation, contributed to several parts of our model (parts 1, 2, 3, 4, 13, 14), it is not explicitly learner centered nor is it tailored specifically to the Catholic culture’s perspective. And because “culture is so much a part of the construction of knowledge that it must underpin not only the analysis phase but all phases of the design process” (Thomas, Mitchell, & Joseph, 2002, p. 41), additional processes and paradigms need to be considered, not the least of which is the application of the seven keys framework itself (part 6). In truth, the seven keys framework informs all the components of this instructional technology design model, including learning objectives, rubrics, and lesson activities.

From the Dick and Carey model (Dick & Carey, 1990; see also Institute of Electrical and Electronics Engineers, 2001), the paradigms of learner or person centeredness (see also C. T. Miller & Mazur, 2000) along with learner behaviors and characteristics, and the stages of defining instructional goals, performance objectives, an instructional strategy, iterative formative evaluations, summative evaluations, and creating criterion referenced test items (i.e., parts 5, 7, 8, 9, 13, 14) make their contribution to this prototype. Several elements from the Kemp, Morrison, and Ross model (Kemp, Morrison, & Ross, 1998) such as defining learner characteristics,
instructional objectives, instructional strategies, instructional delivery, evaluation instruments, and even describing support services (i.e., parts 5, 8, 9, 11, 13, 14) also reinforce or inform the components of this prototype.

Furthermore, the idea of practice (part 12) is important to help students take learned concepts to heart as well as to merge mere information with doing and experience to form authentic knowledge. So while a pre-test prepares and orients students toward the subject, practice that is combined with feedback from the instructor “gives learners the opportunity to perform a similar or identical learning task to that assessed on the posttest” (Martin, Klein, & Sullivan, 2004, p. 637; see also Crawford, 2004, p. 417).

Lastly, the instructional design processes that Shambaugh & Magliaro (1997) proposed served as an overarching guide to the prototype design, providing more detailed design rubrics, and even filling in for where some of the other models failed to specifically address. For example, Shambaugh & Magliaro have an explicit process that considers the possibility for the inclusion of media technologies in the design (part 10), even providing a checklist of sorts for consideration when designing customized instructional media materials (p. 186). The resulting 15 parts taken together may be considered a modified instructional technology model, enhanced and informed by the seven keys framework for Catholic educational use.

This instructional design prototype can function as a template and may be adapted to various lesson plans, home schooling activities, as well as courses in other subject areas that have with them a goal to apply, incorporate or employ media technologies. I also recommend that such a lesson plan created thereof be used especially in introductory
courses as a way for educators and students to reflect on and consider the Catholic worldview for media technology use and deployment in each particular discipline.

Introduction and Situating The Question

The question that interests me in this instructional plan is simply: How should Catholics integrate media technology in their education? This project is a first exploratory step on the journey to empower Catholic institutions to integrate media technology in visionary ways, leading the utilization of media technology in and through the Catholic identity and philosophy of life. My position is that we need to know where we are before we can chart a course to where we want to be.

A Catholic educator who is practicing with the seven keys framework is also thus committed to ongoing reflexivity. Therefore, the situating questions at stake here include: How do I, as a teacher at a Catholic institution, view and practice the use of media technology in my lessons? Is my Catholic institution integrating media technology in all aspects of Catholic education where appropriate? Am I open to exploring and studying what others are doing with educational and instructional technology? As such, am I regularly keeping up with what other Catholic institutions are doing? With what other secular institutions are doing? And in acknowledging that the Catholic worldview calls for communion as much as it recognizes each person’s uniqueness and dignity, am I reflecting with a community of colleagues? Are Catholics using media technology in ways that are different from secular institutions and culture? If so, how? If not, why not, given the scriptural call to be “in the world, but not of the world”? What steps can I take to integrate media technology in all aspects of Catholic education, that is, media literacy
and communication classes, language, mathematics, science, business, humanities, social sciences, fine arts, to name a few, and not just in religious education (see Figure 1)?

Remember that ultimately, the reason for such an instructional technology design plan that is empowered by the Catholic worldview is not so much to provide you with a paint by numbers canvas as it is to orient you towards the Catholic vision of media technology engagement that you will make your own, and so freely craft new and exciting practices in your lessons. It is to empower you, as a Catholic educator, with a well-grounded barometer with which to examine and reflect on other practices of instructional technology. As you study and reflect on this instructional technology map, and as you use the seven keys framework as your compass and guide, illuminated by the flashlight of scripture and grace, my encouragement is for you to be bold in your own teaching with media technologies!
Figure 2. Overview of larger inquiry – praxis logically entailed by the seven keys framework
Needs Assessment

By the very virtue of its technique, its instant transmission of word and image, its near-total access to the entire population of a modern society, it would be difficult surely to imagine a more perfect instrument through which the Church can teach, inform, indeed evangelize. (Percy, 1991, p. 302; see Appendix A)

While there have been some fervent voices that have urged Catholic (or at least religious or moral) media technology engagement (for example, Badaracco, 2005; Farmer, 2002; Hefner, 2003; Hess, 2002; McLuhan, 1999; Percy, 1991; Royalty, 2002; Schultze, 2000), a detailed search of the literature reveals a paucity of research on practical action to effectively define how media technology integrates within Catholic education (see for example, John Paul II, 2005c, para. 11; Pontifical councils, 2002a, para. 9; see also Joseph, 2001, p. 32; Shimabukuro, 2001, p. 135).

Similar sentiments for encouraging critical, interpretive qualitative research directed towards improving communities and societies are echoed in what Lincoln and Denzin (2000) term the seventh moment of inquiry. This seventh moment “asks that the social sciences and the humanities become sites for critical conversations about democracy, race, gender, class, nation, freedom, and community” (p. 1048), even encouraging the author to “engage in a dialogue with those studied” (p. 1051). The criteria for evaluating critical qualitative work for changing the world in positive ways in this seventh moment are moral and ethical (Christians, 2000). Specifically, the community shares values directed towards the moral good of the society, the community being ontologically prior to the person (Christians, 2000, p. 144-149), which harkens us
back to the Catholic Christian worldview of a “communion of persons” (for example, Schultz, 2002, p. 167). In 1971, the Pontifical Council for Social Communication raised important questions on the means of social communication in its definitive document *Communio et Progressio*. For example:

How can we ensure that this swift and haphazard and endless stream of news is properly evaluated and understood?

How, in a society that is committed to the rights of dissent, is the distinction between right and wrong, and true and false, to be made?

How in the face of competition to capture a large popular audience are the media to be prevented from appealing to and inflaming the less admirable tendencies in human nature?

How can one avoid the concentration of the power to communicate in too few hands so that any real dialogue is killed?

How can one avoid allowing communications made indirectly and through machinery to weaken direct human contact – especially when these communications take the form of pictures and images?

When the media invite men to escape into fantasy, what can be done to bring them back to present reality?

How can one stop the media encouraging mental idleness and passivity?

And how can one be certain that the incessant appeal to emotion does not sap reason? (Pontifical councils, 1971, para. 21)
The vision supporting these questions is what motivates ours: What is the proper understanding of the Catholic worldview that defines media technology integration in Catholic education? This curricular model moves the seven keys framework presented in chapter two beyond just the theoretical in terms of both its applicability and in its adaptability.

Problem Defined

There is currently no unifying policy or defining role for media technology in Catholic education. In order to begin a journey to integrate media technology in Catholic institutions, we need to have a direction to take. A definition of what media technology integration in Catholic education means will provide this direction. Thus, an instructional technology plan that is mapped out by the directions that are intrinsic to the seven keys framework, and that is illuminated by the light of scripture and the magisterium, provides the tools for educators to create lessons that integrate media technologies with a Catholic worldview. This prototypical instructional technology plan that integrates Catholic precepts is a specific orientation of the seven keys framework. It also serves to bring together two heretofore largely disparate conversations: (a) scholarly dialogue in instructional technology, and (b) Catholic thought.

The Stakeholders

Who cares whether we have a definition, a worldview, or a plan for media technology integration in Catholic education? Foremost are the parents of children attending Catholic institutions who are concerned about their children’s faith formation. Furthermore, Catholic teachers and education administrators have high stakes in such a
definition, from board members to policy makers, principals, diocesan education
secretaries, instructional and information technology (IT) directors, and naturally, the
Catholic Church and Catholic Christians.
Purpose

Objectives

This prototypical instructional design lesson plan for a significant portion of an Introduction to Mass Media course called Towards a definition of media technology in Catholic education is an example of instruction concerning a systematic definition and policy for media technology integration in Catholic education. Secondarily, this lesson plan may serve as a template for integrating media technology in other subject areas in Catholic education, particularly as an adapted introductory course to other disciplines.

Definitions

By ‘media technology,’ I mean to encompass all modes of media that use technology in one form or another, and that are prevalent at this particular period in our western culture. At this time, this definition would include film, radio, TV, CDs, DVDs, videos, the Internet, computerized cell phones, PDAs, as well as computer mediated entertainment and applications.
A Prototype Lesson

Application of The Seven Keys of Media Technology Engagement Framework

This prototypical lesson provides students with an opportunity to explore those concepts that helped develop the seven keys themselves. Beginning with a broad look at the Catholic worldview, the students progressively tighten their focus on the Catholic worldview of media technology engagement. The intent undergirding this lesson is to position the learning and use of mass media (since, after all, this is an introduction to mass media course) in the context of a capstone project that has students experiencing the Catholic worldview of media technology. They experience media technologies in classroom presentations and discussions, in their research, in their reflections, in their group communications, and in the creation of their final multimedia presentations.

The following sections highlight the way this lesson has been derived from the seven keys. With an aim to organize these sections by proceeding from general concepts to this specific lesson example, each section also begins with a commentary and some example guiding questions that encourage the reader to consider the integration of the particular key in other possible ways. These guiding questions are offered as a launching point for your own media technology engagements.

Balanced: Example Guiding Questions and Commentary

Am I encouraging communication with different cultures and peoples of different backgrounds to attain a balanced viewpoint? Am I striving to represent multiple and diverse viewpoints, especially the underserved or oppressed (For example, Zenit, 2005c)? The conciliar document Ethics in Communications adds:
It is not enough for communicators simply to say that their job is to report things as they are. That undoubtedly is their job. But some instances of human suffering are largely ignored by media even as others are reported; and insofar as this reflects a decision by communicators, it reflects indefensible selectivity. Even more fundamentally, communication structures and policies and the allocation of technology are factors helping to make some people "information rich" and others "information poor" at a time when prosperity, and even survival, depend on information. (Pontifical councils, 2000, para. 14)

Amidst the ‘noise’ that media technologies may create, am I advocating constructive times of silence for contemplation and reflection? Recall that silence can also bring a proper balance to discussions and debate, and that media technologies can be distractions to lineal thinking. Tangentially, an interesting set of experiments on background television program ‘noise’ and pop music with vocals suggest that background noise “is a source of stress and has a detrimental effect on cognitive performance” (Furnham & Strbac, 2002, p. 203). This has implications for doing homework with the television on or studying while wearing music playing devices. A finding was that although people appear to be affected by background noise, various personality types are affected differently, particularly with introverts being affected more strongly than extraverts (Furnham & Bradley, 1997; Furnham, Gunter, & Peterson, 1994; Furnham & Strbac, 2002).

Am I striving to bring students beyond the mere acquisition of data, information, and knowledge to the experience of a deeper wisdom and truth? For example, do I help
students to recognize that all the information of the world at their fingertips does not mean they necessarily and automatically have acquired wisdom as well:

Understanding and wisdom are the fruit of a contemplative eye upon the world, and do not come from a mere accumulation of facts, no matter how interesting. They are the result of an insight which penetrates the deeper meaning of things in relation to one another and to the whole of reality. Moreover, as a forum in which practically everything is acceptable and almost nothing is lasting, the Internet favours a relativistic way of thinking and sometimes feeds the flight from personal responsibility and commitment. (Pontifical councils, 2002c, para. 4)

Do I attempt to show how my subject matter can be relevant to or be communicated through media technologies prevalent in our culture today? How does media technology relate to the subject being discussed? One might answer that in teaching the physical sciences, media technologies can simulate different processes, or on the other hand, if teaching a history lesson, media technologies have the potential to immerse the learner in the particular age’s sights and sounds. Do I take the effort to examine my own use of media technologies? Do I encourage my students to do the same? Do I balance time spent engaging media technologies with time spent in the presence of family and friends? Am I encouraging self-mastery and personal discipline with the use and engagement of media technologies? Even in the keeping pace with new media technologies, care and prudence are paramount as the lack of balance can create a sense of being dislocated:
Running after change, we become techno-evangelists, surfing after the latest fads with no clear route or destination. Some people might call this freedom, but it is the freedom of the unattached and restless tourist, not the contemplative freedom of the sojourner. (Schultze, 2002, p. 206)

To balance the fast pace of media technology developments, we need to cultivate and exercise a recognition of our redemption in Jesus Christ. Redemption gives a teleological cast to our activities, and with an understanding of our present, stretching to our end and perfection in the family of God, we need to seek moral alternatives to secular principles that can limit freedom and thus our understanding of the Catholic worldview.

*Balanced: Application In This Example Lesson*

This lesson emphasizes discussion of media technology in relation to other subject matter, including the social sciences, theology, catechetics, and education. Media technology is never viewed as a standalone topic, but always discussed in connection to its impact on the students and society. To discuss the Catholic worldview, students invariably need to research scripture and theological documents. To discuss the Catholic worldview with regard to education, students need to look into catechetics and educational research. To discuss the impact of media technology on culture, students must venture into the field of social science. In all assignments, silence is regarded highly as students are encouraged to first reflect on their own media technology engagement. As part of this reflection, students individually research articles that support these views. It is only after this first personal reflection that they are encouraged to discuss their views, findings, and thoughts with their team members. Once team members have listened to
and understood one another’s views do they begin work on synthesizing their comments to reflect a cohesive team vision. One member is chosen by the team to share this vision with the class. Thus, there are three essential parts to every assignment: (a) a personal reflection; (b) a group discussion; and (c) sharing with the other students (the ‘masses’ in ‘mass media’).

Attitude: Example Guiding Questions and Commentary

What are my attitudes toward the use of media technologies? Do I see them as tools, as agents that change the way I live, or both? Do I recognize media technologies as wonderful inventions in which humans share in the creative power of God (John Paul II, 1999, para. 1)? The conciliar document Ethics in Communications builds on Pope John Paul II’s Letter to Artists and proposes:

“With loving regard, the divine Artist passes on to the human artist”—and, we might say, to the communicator as well—“a spark of his own surpassing wisdom, calling him to share in his creative power”; in coming to understand this, artists and communicators “come to a full understanding of themselves, their vocation and their mission”. (Pontifical councils, 2000, para. 31)

What are my attitudes on teaching and learning with media technology? Am I listening to students’ needs and discerning what they ought to learn? Do I hold any personal barriers or judgments against media technologies? Do I have an inordinate need for and attachment to media technologies? Do I include them in lessons mainly because of the novelty? Or do I experience an improper sense of control or power in owning the latest and greatest media technology? “The more fully we embrace information
technologies as routes to joy and happiness, the more vacuous our lives become” (Schultze, 2002, p. 191) Do I attempt to remain aware of media technology changes and continue training or formation in their professional use? Do I support positive media technology use for the common good (see for example, Pontifical councils, 2005, para. 3)? What are the ethical and moral dimensions or repercussions of my use of media technologies? For example, this attitudinal question can cover issues that range from privacy to pornography, from consciously indulging in media content that might negatively affect me or those close to me to the time I spend engaging in solitary media technology activities. Am I willing to change the way I engage media technologies? Recall that practicing and modeling proper media technology attitudes as witnesses is fundamental for teaching media technologies effectively (Paul VI, 1975, para. 41).

*Attitude: Application In This Example Lesson*

This lesson challenges the way students view media technologies. Whether from a viewpoint of considering media technologies as distractions from a prayerful life, or from another extreme of unhealthy dependence on media technologies, students are asked to evaluate and reevaluate their attitudes in light of the readings and assignments. The instructor may also encourage students to fast from media technologies as entertainment for a period of time. The amount of time for the fast may range anywhere from a day to a week, or it may also be left up to the individual student to determine what is most appropriate. Their reflections, recorded in their reflection logs, and regardless of whether students decide to participate in the fast or not, may prove highly insightful. The purpose of the fast is not at all to denigrate the importance of entertainment, relaxation, and
leisure. Rather, it is to help students understand their own media technology dependencies and to develop self-mastery:

The absence of control and vigilance is no guarantee of freedom, as many would like us to believe, but rather ends by fostering the indiscriminate use of very powerful instruments that, if badly employed, have devastating effects on the consciences of individuals and on life. (Zenit, 2002, para. 5)

Do students really believe that Christ has set them free and they are thus called to be ‘freer’ in their creative use of media technologies? What is their attitude toward the possibility of changing their own practice and use of the media technologies?

As an interesting point of note (and possibly as an incentive to the students), an ‘experiment’ and challenge of giving up PCs and the Internet was taken up by a PC World magazine contributing editor and reporter. His experience was described in the article titled 20 Days Without a PC: No Email, No Word Processor, No Google…No Problem? Our Reporter Goes Cold Turkey and Lives to Tell the Tale. Spanbauer (2003), the reporter, accepted the challenge from his magazine editor and acknowledging that he “works and plays with computers everyday”, questioned if he would “be better off as an analog guy”. He reports that “twenty days later, I’m glad that I did. Sure, I missed Google, MapQuest, and spelling checking. But my digital exile had unexpected upsides – and it revealed how PCs controlled me, in ways I hadn’t seen before” (p. 119). Following a day-by-day report, he “reenters the 21st century” and spends the next 48 hours sifting through more than 2000 email messages, including 1571 pieces of unsolicited commercial email. He laments that:
You produce more work and consume more entertainment and information because…well, because you can. Simultaneously, the PC’s complexity robs us of time. I’m not talking about spam and buggy software. I ponder the labor that I sink into downloading the pirated *Sopranos* episodes from the Net….Part of me wants to shove the laptop back in the safe. I don’t – but I do vow to demote the PC a bit from its position of central importance in my life. Maybe I’ll close most of my e-mail addresses. I may read one news service instead of five. I might even get rid of a computer or two. In the end, 20 days without a PC wasn’t long enough to permit a final verdict….Even so, I would happily do it all over again. (p. 122)

For our reflections, what notions can we draw from Spanbauer’s experience? Are there attitudinal changes for our own media technology engagements that we are now more aware of and that we should implement? Do his suggested ‘reforms’ give us ideas on practical actions that we can take with media technologies in our lives?

Additionally, as the goal of the lesson’s project, students are tasked to discover five definitions, roles, standards, or policies for media technology in Catholic education. I have consciously labored to avoid a narrow definition of Catholic media technology engagement in favor of an integrated approach that finds value in a systematic effort to understand the ‘total vision’ of the role of media technology in human lives. The limitation of no more than five definitions that is placed on the students in their project is not so much to create a narrow definition as to focus the students on the most essential elements while conducting their discussions. No grand theory is sought from the students here. As with human growth, this course allows the students’ definitions to evolve with
their ongoing reflections and discussions. Some attitudinal questions they might keep in mind during the entire process include: What are our goals for using media technology in education? Is the use of media technology in the particular form that is chosen bearing good fruit and pleasing to God? Do we pause to pray, listen, observe, and assess media technology integration?

**Personal: Example Guiding Questions and Commentary**

Am I using media technology in ways that support the dignity of the human person? For example, in addressing a commission of the United Nations (U.N.) General Assembly on “Questions Relating to Information”, the Holy See’s permanent observer to the U.N. Archbishop Migliore emphasized: “Perhaps the most essential question raised by technological progress is whether, as a result of it, people will grow in dignity, responsibility and openness to others” (Zenit, 2005c; see also John Paul II, 2005c, para. 10; Zenit, 2005d). Do I encourage the use of media technologies in ways that are relevant to the needs and present circumstances of individuals? Am I acknowledging and allowing for the personal opinions, feelings, and thoughts of individuals, striving to ensure that the use of media technologies do not obscure the personal identities of students? Do I support the influence of positive family values and parental involvement, especially supporting shared family engagement of media technologies? In the 38th World Communications Day message, *The Media and the Family: A Risk and a Richness*, Pope John Paul II (2004) urged families to reconsider their media technology practices:

Parents also need to regulate the use of media in the home. This would include planning and scheduling media use, strictly limiting the time children devote to
media, making entertainment a family experience, putting some media entirely off limits and periodically excluding all of them for the sake of other family activities. Above all, parents should give good example to children by their own thoughtful and selective use of media. (para. 5)

Do I encourage media technology activities that are non-isolating? Do I encourage communications with those who are different, ‘those not like us’? Do I encourage media technology activities that help bridge the digital divide?

**Personal: Application In This Example Lesson**

A personal media technology usage exercise in which each student keeps a record of the quantity and ways in which one uses media technology within a given time frame serves to motivate self-reflection. This exercise may be discussed in contrast (or as a support) to the media technology fast. Again, regardless of whether students decide to fast or not, the self-reflection is recorded in the logs and of itself, can prove most illuminating to the student. If the student decides to fast, then questions such as “what motivated you?” or “what did you do with the ‘freed up’ time?” may be posed. On the other hand, if students decide not to fast or break the fast prematurely, then questions such as “why did you decide not to undergo the fast?” or “what motivated you to break the fast?” may be appropriate. Also, the requirement that students work in teams helps to balance the interpersonal discussions with the intrapersonal reflections.

**Truth-filled: Example Guiding Questions and Commentary**

Is the content that is communicated by the media technologies truthful? And since truth and beauty are naturally combined (cf. Philippians 4:8, New American Bible), am I
using this concept to convey attractive media technology messages? John Paul II presented beauty as a path for the Church to proclaim the message of the Gospel to a modern world. A Zenit (2004) communiqué cites John Paul II and reports:

The testimony of Christians, if it is to make an impact on modern society, cannot cease to be nourished by beauty in order to become an eloquent transparency of the beauty of the love of God.” The task of Christian intellectuals, and in particular of artists, is “to nourish the love of everything that is an authentic expression of human genius, reflection of the divine beauty. (para. 7 – 8)

Am I going beyond the media technology facade, beyond the ‘bells and whistles’ and the novelty, going deep enough to reach what connects us all as human beings? Created in the image and likeness of God, human beings share common qualities that include joys, sorrows, desires, dreams, fears, and hopes. If Catholic content creators are able to be honest with themselves, digging deeply into their own strengths and weaknesses to the traits that all human beings share, then their content will not only reflect their authentic Catholic worldview, but it will also likely connect with a secular audience. In the book Crafting Short Screenplays that Connect, C. H. Johnson (2005) advises: “Though our lives may be different, our desires, our needs are the same” (p. 13). Though this text is targeted at readers interested in the craft of scriptwriting, the observation about storytelling is apt here. C. H. Johnson continues: “Seek yourself, your experience, your unique vision. In the end, that’s the most valuable thing you have to offer. All you can give us is what life is about from your point of view….Everything else has been done” (p. 22).
Am I selecting the most effective media technology form to communicate the particular truth I want to convey? As a Catholic communicator, am I accepting the responsibility to communicate the good news of the Gospel? Do I avoid becoming a moralist, but instead seek to tell the truth fully and faithfully?

*Truth-filled: Application In This Example Lesson*

The emphasis of the lesson is on sources that are relevant and authentic. The relevance of articles researched is determined first by the individual reflections that each student performs. Through reflections, students decide what concerns or experiences are personally relevant to them. Writing these down as potential issues with media technology engagement, students search for articles that support these concerns or experiences. The lesson requires that articles be drawn from a wide variety of sources, from journals and dissertations, to books and online sources, all articles must be tested for authenticity. To test for authenticity, several methods are used. For example, students may check if the content of the articles align with scriptural or magisterial documents. They may also review the bibliographies of these articles to see if Church accepted or approved sources are listed. Additionally, they may ask their instructor or even another instructor in the appropriate discipline and who is more familiar with the particular subject matter of the questionable article.

*Inspires: Example Guiding Questions and Commentary*

Does the message being communicated through media technology inspire one to search for truth? Does my media technology content inspire reflection and contemplation? Does my media technology content inspire hope and the practice of
virtues? Does my use of media technology capture the attention and enkindle authentic interest in the subject? Do I strive to apply media technologies in ways that arouse curiosity and the pursuit of deeper learning? Since to inspire also presupposes a personal lived experience and conviction of the messages and lessons being presented, am I convinced of my faith and the power of media technologies to positively be used in the service of humanity? Inspired by faith, the Catholic media technology communicator exhibits parrhesia, the Greek term used in the Acts of the Apostles to describe the enthusiasm to “speak frankly and with courage” (John Paul II, 1990b, para. 45)

*Inspires: Application In This Example Lesson*

Students are periodically reminded that their responses, assignments, reflections, and projects are useful in a myriad of ways. From the creation of a personal portfolio to preparing to help others build bridges from everyday life to authentic faith through media technologies, this lesson encourages students to reflect and discuss contemporary issues in society that are relevant to them and their peers in secular schools. This form of lineal discourse also prepares them for a life after graduation where evangelization may mean writing a letter to a local TV station or newspaper, or even a simple conversation about a movie they just watched with friends who do not know or do not share the Catholic worldview. The students are reminded that the Church wants to be in the media and to hear what young people are saying: A communiqué from the participants at the "Do Not Be Afraid of the Media!" European Bishops’ Media Commission (CEEM) proclaims, “Let us go where people do not expect us; let us enter the arena when the Church is called to take part in society's debates and encourage those who do”. The aim of the CEEM
meeting was “to analyse the media culture and to try to understand how young people relate to it, in order to establish pastoral priorities” (Zenit, 2005g).

Skill Development: Example Guiding Questions and Commentary

Am I willing to learn the skills necessary to effectively use media technologies? Do I strive to remain up to date and innovative in my skills? It is essential for Catholic educators not only to strive to learn about the Catholic faith, but also the skills necessary to teach with media technologies as well as to keep abreast of effective pedagogical methods:

Educators must realize that poor teaching, resulting from insufficient preparation of classes or outdated pedagogical methods, is going to hinder them severely in their call to contribute to an integral formation of the students; it will also obscure the life witness that they must present. (The Sacred Congregation for Catholic Education, 1982, para. 27)

Is what I teach in media technologies important and effective in real world education? Do I encourage the enthusiasm for creative content? For responsible content? Media technology facilitates our communications and our messaging, but it does not make us more responsible communicators and messengers (Schultze, 2002, p. 199). Am I shaping both the intellect and conscience with regard to the application of media technologies? Do I encourage students to develop their media technology talents? In urging Catholics in the world to rethink their attitudes toward media technologies, Pope John Paul II also added:
Those individuals in the Church community particularly gifted with talents to work in the media, should be encouraged with pastoral prudence and wisdom, so that they may become professionals capable of dialoguing with the vast world of the mass media. (Zenit, 2005e, para. 9)

*Skill Development: Application In This Example Lesson*

Students have access to numerous media technology tools with which to present their projects. Since the final project of the lesson requires a presentation, they are encouraged to learn tasks such as creating a website or a short video. They may, for example, create a website by using Microsoft Word or by using a dedicated web-authoring tool. A few class sessions and numerous lab hours can be reserved for demonstrating the use of some of these tools as well as providing resources and links to free software applications and tutorials online.

*Motivated By and Relevant To Experience: Example Guiding Questions and Commentary*

The impact of the media in today's world can hardly be exaggerated. The advent of the information society is a real cultural revolution, making the media “the first Areopagus of the modern age”, where facts and ideas and values are constantly being exchanged. Through the media, people come into contact with other people and events, and form their opinions about the world they live in - indeed, form their understanding of the meaning of life. For many, the experience of living is to a great extent an experience of the media. The proclamation of Christ must be part of this experience. (John Paul II, 2000, para. 9)
How can I make Christ a part of this media technology experience? Is the goal of my lesson to provide students with sensory-experiential events (SEE)? Am I applying media technologies in sensory-experiential ways? As part of the experience, am I creating opportunities to experience the moral, social, and cultural dimensions of my subject? Do these learning experiences benefit society and the Church? Am I forcing media technology sensory-experiential learning for what could be best learned in another manner, for example, through a lineal, primary literate method? Am I ensuring educative experiences (versus ‘chaotic’ experiences) by incorporating guiding principles to direct the encounters my students are immersed in? Teachers must be context setters, “the designer of a learning experience” (Fullan, 2001a, p. 112). Additionally, these educative experiences need to create a problem that the student has heretofore not encountered:

Unless a given experience leads out into a field previously unfamiliar no problems arise, while problems are the stimulus to thinking….Once more, it is part of the educator’s responsibility to see equally to two things: First, that the problem grows out of the conditions of the experience being had in the present, and that it is within the range of the capacity of the students; and, secondly, that it is such that it arouses in the learner an active quest for information and for production of new ideas. (Dewey, 1938, p. 79; see also Giussani, 1995, p. 9)

Do I assist my students in interpreting what they are experiencing? What feelings and beliefs am I or are my students bringing into this experience? Am I offering opportunities to critically examine these experiences? Without these latter opportunities, students will either irrationally reject or irrationally accept their learning, but their faith
and indeed their maturity will never quite fully develop. This may lead to fanaticism at one end, or rejection at the other, of what they have been taught. What media technology stimuli am I incorporating? Am I doing it appropriately and effectively? Am I overloading some senses or am I spreading the cognitive workload over various senses?

Motivated By and Relevant To Experience: Application In This Example Lesson

As has already been mentioned, students must first reflect on media technology experiences that are relevant to them personally. Only after they do this should they present their thoughts on media technology issues to the group. Using a three-step process of reflection, discussion, and sharing, this lesson engages by drawing out what is inherently of interest to the student. In this sense also, new knowledge learned in class or through group discussions are built on personal, prior knowledge. The lesson incorporates a number of sensory-experiential events through multimedia sessions that feature animations, audio programs, text, images, videos, and interactive games. The macroscopic view of the three ages of primary oral, literate, and electronic (media technology) is employed on a microscopic level in many of these lessons. For example, within a session, a short audio clip is followed by a class discussion on the effects of that audio clip’s form and message, and concludes with a video clip documentary about the impact of Internet radio and podcasting today.

Table 1 assembles the seven keys to Catholic media technology engagement together with the example guiding questions for each key so as to enable easy review and use.
Table 1

*Example guiding questions for the seven keys to Catholic media technology engagement*

<table>
<thead>
<tr>
<th>Keys to Catholic media technology engagement</th>
<th>Example guiding questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Balanced</td>
<td>Am I encouraging communication with different cultures and peoples of different backgrounds to attain a balanced viewpoint? Amidst the ‘noise’ that media technologies may create, am I advocating constructive times of silence for contemplation and reflection? Am I striving to bring students beyond the mere acquisition of data, information, and knowledge to the experience of a deeper wisdom and truth? Do I take the effort to examine my own use of media technologies? Do I encourage my students to do the same? Do I balance time spent engaging media technologies with time spent in the presence of family and friends? Am I encouraging self-mastery and personal discipline with the use and engagement of media technologies?</td>
</tr>
</tbody>
</table>
Table 1 (continued)

<table>
<thead>
<tr>
<th>Keys to Catholic media technology engagement</th>
<th>Example guiding questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Attitude</td>
<td>What are my attitudes toward the use of media technologies? Do I see them as tools, as agents that change the way I live, or both? Do I recognize media technologies as wonderful inventions in which humans share in the creative power of God? What are my attitudes on teaching and learning with media technology? Am I listening to students’ needs and discerning what they ought to learn? Do I hold any personal barriers or judgments against media technologies? Do I have an inordinate need for and attachment to the latest and greatest media technology forms? Do I attempt to remain aware of media technology changes and continue training or formation in their professional use? Do I support positive media technology use for the common good? Am I willing to change the way I engage media technologies?</td>
</tr>
<tr>
<td>Keys to Catholic media technology engagement</td>
<td>Example guiding questions</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>3. Personal</td>
<td>Am I using media technology in ways that support the dignity of the human person? Do I encourage the use of media technologies in ways that are relevant to the needs and present circumstances of individuals? Am I acknowledging and allowing for the personal opinions, feelings, and thoughts of individuals, striving to ensure that the use of media technologies do not obscure the personal identities of students? Do I support the influence of positive family values and parental involvement, especially supporting shared family engagement of media technologies? Do I encourage media technology activities that are non-isolating? Do I encourage media technology activities that help bridge the digital divide? Do I encourage communications with those who are different, ‘those not like us’?</td>
</tr>
<tr>
<td>Keys to Catholic media technology engagement</td>
<td>Example guiding questions</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>4. Truth-filled</td>
<td>Is the content that is communicated by the media technologies truthful? Am I going beyond the media technology facade, beyond the ‘bells and whistles’, going deep enough to reach what connects us all as human beings? Am I selecting the most effective media technology form to communicate the particular truth I want to convey? As a Catholic communicator, am I accepting the responsibility to communicate the good news of the Gospel? Do I avoid becoming a moralist, but instead seek to tell the truth fully and faithfully?</td>
</tr>
<tr>
<td>Keys to Catholic media technology engagement</td>
<td>Example guiding questions</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>5. Inspires</td>
<td>Does the message being communicated through media technology inspire one to search for truth? Does my media technology content inspire reflection and contemplation? Does my media technology content inspire hope and the practice of virtues? Does my use of media technology capture the attention and enkindle authentic interest in the subject? Do I strive to apply media technologies in ways that arouse curiosity and the pursuit of deeper learning? Since to inspire also presupposes a personal lived experience and conviction of the messages and lessons being presented, am I convinced of my faith and the power of media technologies to positively be used in the service of humanity?</td>
</tr>
</tbody>
</table>
Table 1 (continued)

<table>
<thead>
<tr>
<th>Keys to Catholic media technology engagement</th>
<th>Example guiding questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Skill development</td>
<td>Am I willing to learn the skills necessary to effectively use media technologies? Do I strive to remain up to date and innovative in my skills? Is what I teach in media technologies important and effective in real world education? Do I encourage the enthusiasm for creative content? For responsible content? Am I shaping both the intellect and conscience with regard to the application of media technologies? Do I encourage students to develop their media technology talents?</td>
</tr>
<tr>
<td>Keys to Catholic media technology engagement</td>
<td>Example guiding questions</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>7. Motivated by and relevant to experience</td>
<td>How can I make Christ a part of this media technology experience? Is the goal of my lesson to provide students with sensory-experiential events (SEEs)? Am I applying media technologies in sensory-experiential ways? As part of the experience, am I creating opportunities to experience the moral, social, and cultural dimensions of my subject? Do these learning experiences benefit society and the Church? Am I forcing media technology sensory-experiential learning for what could be best learned in another manner, for example, through a lineal, primary literate method? Am I ensuring educative experiences (versus ‘chaotic’ experiences) by incorporating guiding principles to direct the encounters my students are immersed in? Do I assist my students in interpreting what they are experiencing? Am I offering opportunities to critically examine these experiences? What media technology stimuli am I incorporating?</td>
</tr>
</tbody>
</table>
Learning Objectives As Behaviorally Focused

By the end of the *Introduction to Mass Media* course, students will be able to: (a) identify media technology parameters in the light of the teachings of the Catholic faith; (b) compare and contrast media technology use in a Catholic worldview and in secular worldview; and (c) demonstrate effective media technology use in Catholic education through the creation of an audio-visual presentation and the utilization of media technologies in research tasks (Figure 3).
Figure 3. Concept map of units and lesson objectives for “Towards a definition of 'media technology in Catholic education’”

Tasks, subordinate tasks and skills sets have objectives that fall within the cognitive domain (see Table 2), since they require students to (a) identify and comprehend the topic; (b) apply their knowledge in finding illustrative and pertinent examples using media technologies; (c) categorize and contrast their findings; (d) evaluate their work in a synthesized presentation. With the intention of promoting
community, discussion, and collaboration, all the above tasks are performed in small, three to four person groups.

Table 2

*Task Inventory*

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Subordinate knowledge tasks and skill sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify appropriate media technology definitions, parameters, and uses in the light of the Catholic worldview</td>
<td>Research magisterial documents including encyclicals, apostolic letters, world communications day communiqués, and transcribed general audiences. Research appropriate scriptural passages. Research taxonomies of current media technology use in education. Use a word processor to compile, organize, and collate arguments. Use a presentation application to summarize and present findings in class. Class and group discussion on findings.</td>
</tr>
<tr>
<td>2. Compare and contrast media technology use in Catholic education and secular education</td>
<td>Research communication theories. Research current media technology use in Catholic education. Research current media technology use in secular institutions. Generalize these findings. Use a word processor to compile, organize, and collate arguments. Use a presentation application to summarize and present findings in class. Class and group discussion on findings.</td>
</tr>
</tbody>
</table>
Table 2 (continued)

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Subordinate knowledge tasks and skill sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Identify, describe and create an audio-visual presentation of an example of effective media technology use in Catholic education</td>
<td>Group work to brainstorm and create an example of media technology use in Catholic education with creativity and experimentation highly encouraged. Use of audio-visuels and authoring to present this created example. Use a presentation application to summarize and present in class. Class and group discussion on results.</td>
</tr>
</tbody>
</table>

**Terminal Objectives**

Given access to online and offline resources, each student-group crafts a definition of media technology application in education as formed through the lens of a Catholic worldview. For example, a student-group might begin: “A definition of media technology application in education must include…” This task requires both a discovery approach and an exploratory attitude.

**Enabling Objectives**

The enabling objectives are listed as part of a task/objective/criterion chart with corresponding Bloom’s cognitive domains (Table 3).
Table 3

*Task/Objective/Criterion chart with corresponding cognitive domains*

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Objectives</th>
<th>Bloom’s cognitive domains</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Review of American</td>
<td>Given access online as well as to the APA 5th</td>
<td>Knowledge, comprehension</td>
<td>Create an APA bibliography of a minimum of 10 items per group relevant to media technology and the Catholic faith.</td>
</tr>
<tr>
<td>Psychological Association</td>
<td>edition guide, students review references that</td>
<td></td>
<td></td>
</tr>
<tr>
<td>styles.</td>
<td>conform to the APA style.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tasks</td>
<td>Objectives</td>
<td>Bloom’s cognitive domains</td>
<td>Criteria</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>---------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2. Define a Catholic worldview as a prelude to narrowing the focus to media technology.</td>
<td>Given scripture, the Catechism of the Catholic Church (CCC), and other pertinent documents, define a catholic worldview.</td>
<td>Knowledge, comprehension</td>
<td>Each group writes a definition that includes no more than five criteria, stating at least five references.</td>
</tr>
<tr>
<td>3. Identify media technology references in magisterial documents.</td>
<td>Given access to magisterial documents, identify media technology references.</td>
<td>Knowledge, comprehension</td>
<td>Add a minimum of 10 more applicable references to the APA bibliography created in the first task.</td>
</tr>
</tbody>
</table>
Table 3 (continued)

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Objectives</th>
<th>Bloom’s cognitive domains</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Define media technology applications/integration in education.</td>
<td>Given access online, explore various definitions of how media technology is integrated in education.</td>
<td>Knowledge, comprehension, application</td>
<td>Each group writes a definition that includes no more than five criteria, stating at least five references.</td>
</tr>
<tr>
<td>5. Define media technology application in education as formed through the lens of a Catholic worldview.</td>
<td>Categorize, differentiate, compare and contrast the resulting definitions from tasks 2 and 4.</td>
<td>Knowledge, comprehension, application, analysis</td>
<td>A single definition (per group) of media technology application in Catholic education with no more than five criteria, stating at least five references.</td>
</tr>
</tbody>
</table>
Table 3 (continued)

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Objectives</th>
<th>Bloom’s cognitive domains</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Create a definition as a class.</td>
<td>A designated group member from each of the groups presents the group definition, and class discusses the definitions to create a single class definition.</td>
<td>Synthesis, evaluation</td>
<td>A single definition of media technology application in Catholic education with no more than five criteria.</td>
</tr>
</tbody>
</table>

*Environmental Context and Learner Setting*

Be mindful that this is a prototypical lesson plan to orient and prepare educators who intend to integrate media technology in Catholic education. As such, this section describes ideal and ‘perfect’ settings in an effort to generalize the instructional technology practice as viewed through the Catholic worldview. Adopting a broad overview should allow the educator to tailor the application to a specific environment. At the same time, to ground the descriptions in reality, I acknowledge that I bring my own experience in teaching at a Catholic university to bear.

This course may accommodate 40 students. The students cluster themselves in groups of three or four following a constructivist group learning and problem-solving model (Yager, 1991). They should remain in their groups throughout the course. Unless
exceptional circumstances warrant, all members within a group receive the same grade on a project. This lesson forms a key goal of the course, and it is expected that students spend an appropriate amount of outside class time for preparation, research, discussion, and refining the work done in class.

A small mid-western Catholic university that exhibits a strong sense of community and shares a common morality as defined scripturally is a prototypical site for this example lesson. Evidence for these criteria may include demonstrable actions such as: (a) Faculty who sign a mandatum, which is a document of teaching truths in fidelity to the magisterium in an acknowledgement ceremony witnessed by students, administration, and parents; (b) administration encouraging the university community to assist flood victims in the cleanup process by giving paid time off; (c) students encouraging other students to sign up for round-the-clock eucharistic adoration as well as Good Friday round-the-clock and weekly Saturday early morning travels to nearby cities to form prayer teams outside abortion clinics; (d) student run, written, and edited university newspaper defending magisterium teaching and advocating moral lifestyles with article titles such as Pope John Paul II, the true feminist, and ‘If you want to be pursued, you’ve got to be chaste’; (e) multiple retreats and mission trips undertaken by students during the semester as well as during school breaks; (f) the university’s mission statement explicitly affirms the Roman Catholic faith. For example, the mission might state in similar terms that as a “publicly identified” Catholic institution, it embraces a purpose “to promote the moral, spiritual, and religious values of its students,” and that “through academic and co-curricular programs, the University promotes the ongoing and deepening of life in the
Lord Jesus Christ and in the Church….embraces a Catholic worldview; [and] encourages service off campus to the poor as an essential part of a student's educational experience” (The mission of Franciscan University of Steubenville, n.d., parts II and III).

From equipment inventory lists, it may be ascertained if the media technology that is in place is sufficient to successfully conduct this course. Specifically, the physical setting of this course may comprise a lecture theatre with a large projection screen. The instructor should have the option to connect a portable laptop to a projector as needed for delivery of class content. The alternative might be to access media content off a network via a computer connected to the podium’s projector.

The students should have access to lab assistance and instructor office hours, as well as to various media technology tools that ideally include Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Microsoft FrontPage, Adobe Photoshop, Adobe ImageReady, Adobe Illustrator, Adobe Premiere Pro, Adobe Audition, Adobe After Effects, Adobe Encore DVD, and Macromedia Flash. This course would require a web browser to conduct research on the Internet as well as to gain access to online research databases. A Macromedia Flash plugin for the web browser is required to view multimedia content and to access an online class website that would have additional resources. Students may use the same audio-visual equipment that is available in the lecture theatre to deliver their presentations for the purposes of generating discussion and soliciting instructor and class feedback.
Learner Characteristics and Contextual Analysis

A usable representation of general learner characteristics can be outlined based on informal student conversations, class discussions, and personal experience. For example, student demographics for this course generally comprise of majors from religious education and communication, with good representations also from general education, humanities, theology, and the sciences. Students normally range in age from 18 to 21, largely comprised of undergraduates, and with a balance between males and females. Students typically enter this course in their first or second year at the university.

Additional detail that delineates learner characteristics such as student experience, expectations, and prior conceptions can also prove helpful. For example, from previous conversations and class discussions, students raised concerns and agonized over their personal propensity to be “distracted by the ‘lure’ of media technology” on the one hand, and on the other hand, expressed desire for self-discipline, focus, and “quiet time in prayer”. Several students voiced the concern that media technology greatly lacks the “warmth and communion that a personal face-to-face encounter with another human being” affords. It might be added that perhaps the phrase ‘media technology literacy’ can be used when referring to effectively creating messages via media technology, while ‘media technology awareness’ should refer to an understanding of the effects of media technology on the moral and ethical decision making process. It may also be inferred from the informal conversations that many students begin such a course already with a level of comfort in at least one form of media technology, having been exposed to some type of media technology in this digital culture. Such descriptions provide a context for
media technology lesson integration and are invaluable to proper instructional technology design planning

*Instructional Strategies*

A combination of instructional ideas as proposed by English (1980), Keller (1983), and Shambaugh & Magliaro (1997) are employed in crafting this course’s strategy. English (1980) proposed a tripartite model of (a) curriculum, (b) content, and (b) learning. In this course, the seven media technology engagement keys are fundamental in shaping the curriculum. The course content is in turn guided by this curriculum, while learning is evaluated based on the content objectives. The ideas that Keller (1983) offers on relevance are also useful: this course affirms the importance of motivation through repeated affirmation and reminders of relevance to student goals, especially the need for connecting to students’ prior experiences as well as the need to create tangible products to add to personal portfolios in preparation for future employment. Practicable tasks encourage learner confidence, while formative individual group evaluations during designated class times promote satisfaction in what is learned. This course draws inspiration from the instructional design model that Shambaugh & Magliaro (1997) propose. For example, a website of student resources may be hosted on the institution’s servers. These resources might include hyperlinks and other material that not only meet the course objectives, but also appeal to an audience accustomed to the ubiquitous accessibility of media technologies (p. 186). For this prototypical lesson, the role of the instructor is primarily to facilitate student self-explorations with guiding questions.
Technologies Employed

Students employ browsers for research, word processors for article write-ups, and presentation software of their choosing (for example, Photoshop for visuals, Premiere Pro for video, Audacity or Audition for audio, Flash, HTML editors, or PowerPoint for authoring). Moreover, students can upload or email finished assignments and reflection logs directly to the instructor for grading and feedback.

Delivery System

Given the learner setting and student characteristics as outlined in the example above, this lesson unit can be delivered as an online interactive Portable Document Format (PDF) file which is accessible from the course website. For a prototypical example of the content of such a PDF lesson, please take a look at Appendix C. Table 4 highlights some features of such a delivery system.
Table 4

*Features of the “Towards a definition of ‘media technology in Catholic education’” lesson*

<table>
<thead>
<tr>
<th>Features</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Security</td>
<td>Students are able to enter text and numbers in fields, and to print the document. All other functionality is secured via an instructor password.</td>
</tr>
<tr>
<td>2. Active links</td>
<td>Active URLs link students directly to websites, reducing typing errors.</td>
</tr>
<tr>
<td>3. Group name fields</td>
<td>Students enter their group names once. The names propagate automatically in the appropriate group name fields throughout the document. Fields are set as ‘required’, and prompt students with a tool-tip to fill in the appropriate information before submission.</td>
</tr>
<tr>
<td>4. Text fields</td>
<td>Students enter comments in the rubric text fields. Automatic spell-check through Acrobat PDF can be turned on for these fields. Fields are set as ‘required’, and prompt students with a tool-tip to fill in the appropriate information.</td>
</tr>
</tbody>
</table>
Table 4 (continued)

<table>
<thead>
<tr>
<th>Features</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Number fields</td>
<td>Students can rate themselves by entering numbered grades into the rubric’s grade fields. The number fields can be set to automatically check for and accept only valid integral numbers within a certain range, for example, between zero and five where zero means the students did not make the grade, and five means the maximum score is achieved. The total can be automatically calculated and displayed in another field that has been labeled ‘total score’. Fields are set as ‘required’ and prompt students with a tool-tip to fill in the appropriate information.</td>
</tr>
</tbody>
</table>

*Pre-, Practice-, Post-Tests*

To take such a course, students presumably have the basic skills required. Examples of basic skills are the ability to use computers with online access to perform research, and the ability to present these findings with basic word processors and presentation software. Students should also be able to obtain help from (a) peers in the class, (b) fellow teammates, (b) the instructor, or (c) lab assistants. While it may not be the intention of such a prototypical course to teach all the applications that could potentially be used to enhance the presentation of the material (e.g., Flash, Premiere Pro, HTML), basic demonstrations for how to use media technologies may be incorporated into the course. As such, students should be encouraged, just as in the media technology
industry, to exercise their own judgment and choice in terms of which software applications are most appropriate. To properly practice the skill development key of the seven keys framework, regardless of the choice of delivery medium, a professional attitude and product must be expected.

A pre-test can be incorporated as part of the lesson. For example, the first task can require students to search for examples of APA reference styles, and then to compile an APA-formatted bibliography of media technology and faith related sources. After student teams submit this assignment by email, the instructor grades and emails the feedback to the teams. Additional ‘lab’ time can also be given to complete tasks as needed, and the instructor may choose to provide feedback during these ‘lab’ sessions.

Practice comes through lessons that build from general to specific, from less challenging topics to more comprehensive ones that incorporate additional cognitive domains. For example, students reflecting on their own media technology engagement must eventually move toward discussing and presenting a cohesive group view of an effective media technology application in Catholic education. Such a task would meet the domains of the personal and of balance in the seven keys framework.

The post-test for this prototypical course is the synthesized audio-visual presentation, a tangible product that the students can add to their personal career portfolios. The post-test for this example lesson is a written definition that would satisfy the terminal objective, which in turn is evaluated against a rubric for content, focus, and researched sources (Table 5). The instructor fills in the grade and feedback column of the rubric and emails the team this completed rubric.
Table 5

*Rubric for creating a definition of media technology in Catholic education*

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Rating with Explanatory Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Print outs and electronic documents of all deliverables turned in and meet APA style format.</td>
<td>5= excellent; 4=good; 3=almost, but needs work; 2=barely; 1=not even close; 0=failed to meet criteria</td>
</tr>
<tr>
<td>2. Bibliography has a minimum of 20 references with each reference relating to <em>both</em> media technology and the Catholic faith.</td>
<td></td>
</tr>
<tr>
<td>3. Definition of ‘Catholic worldview’ that includes no more than five criteria, stating at least five references.</td>
<td></td>
</tr>
<tr>
<td>4. Definition of media technology applications/integration in education that includes no more than five criteria, stating at least five references.</td>
<td></td>
</tr>
</tbody>
</table>
Table 5 (continued)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Rating with Explanatory Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 = excellent; 4 = good; 3 = almost, but needs work; 2 = barely; 1 = not even close; 0 = failed to meet criteria</td>
<td></td>
</tr>
</tbody>
</table>

5. Definition of media technology application in education as formed through the lens of a Catholic worldview that includes no more than five criteria, stating at least five references.

Total (max. 25 points).

**Note.** Electronic documents are to be in the form of editable PDFs, RTF or Word documents. References must include at least each of the following: journal, book, dissertation/thesis, and online source.

Additionally, an assessment that helps students to measure, chart, and discern their own weekly media technology usage can be made available as an Excel file through the course website. Such a file might automate the process of recording media technology engagement for various media forms over a prescribed period of time. For example, students can take account of their own individual media technology usage patterns, then complete and return this assessment to the instructor electronically. Next, a programmed
script can retrieve the information from the assessments to automatically update a database located on the instructor’s personal computer. The data can then be compiled and used to chart media technology usage of all the students in the course, which is then shown as an aggregate in class. The data may even be compared with national aggregated data of media technology usage as a point of discussion. This can prove interesting and engaging for students in their participation of the lesson, both to see their personal take of the concepts in the *Introduction to Mass Media* course, and to discuss possible explanations of any emergent patterns, thus meeting the domains of ‘balance’, ‘attitude’, ‘personal’, and ‘motivated by relevance’ of the seven keys framework.

*Formative Evaluation Strategies*

Small group evaluations constitute a major part of the formative evaluation strategy for the *Towards a definition of media technology in Catholic education* prototype lesson. Student groups create bi-weekly logs that document reflections of their own practice in using media technologies in their lesson work and in their presentations. The logs may even take the form of blogs depending on student comfort level and setup time. The intention for group based, as opposed to individual log submission, is to maintain individual anonymity (and so, it is hoped, truthfulness and candidness of the reflections), while still sustaining responsible comments. A section of each log focuses on ideas that students might come up with for improving the course. Guiding questions such as: “Are you clear about the objectives?” or, “If there was one thing you can change in this course to improve your learning, what would it be?” or, “Can you think of more efficient and/or more engaging uses of media technology for this course?” can be provided verbally in
class and within each instructor-group meeting. Sample guiding questions might take the form in Table 6:

Table 6

*Sample reflection log/blog guiding questions*

<table>
<thead>
<tr>
<th>Goal</th>
<th>Guiding questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>Are you clear about the objectives of the lesson? What are the objectives?</td>
</tr>
<tr>
<td>Technical quality</td>
<td>How is the technical quality? Can you think of more efficient and/or more engaging/healthy uses of media technology for education?</td>
</tr>
<tr>
<td>Learnability</td>
<td>What have you learned? List at least one idea/concept/item that you never knew before this lesson.</td>
</tr>
<tr>
<td>Reflection</td>
<td>As you reflect and think about your own use and engagement of media technology in accomplishing the goals of this course, how does media technology affect/disturb/support/etc. you on a daily basis?</td>
</tr>
<tr>
<td>Other comments</td>
<td>If there is one thing that you can change in this course to improve your learning, what would it be?</td>
</tr>
</tbody>
</table>
These questions address the “three major issues of content, technical quality, and learnability” in formative evaluation as proposed by Shambaugh & Magliaro (1997, p. 225) and adds a reflective dimension that infuses a more holistic approach in line with the thinking proposed by the seven keys. Attitudinal objectives may also be subjectively assessed at these points. These logs should then be reviewed on a bi-weekly basis and any appropriate lesson improvements can be quickly disseminated through the online course website. The instructor may use a similar form to the structure proposed in Table 7 to aid course evaluation. For example:

Table 7

*Sample formative evaluation indicators*

<table>
<thead>
<tr>
<th>Goal</th>
<th>Coded indicators (culled from student reflection logs)</th>
<th>Measures taken to improve course form and content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>Are students clear about the objectives of the lesson?</td>
<td></td>
</tr>
<tr>
<td>Technical quality</td>
<td>Are students engaged through uses of media technology for this course?</td>
<td></td>
</tr>
<tr>
<td>Learnability</td>
<td>What have students learned?</td>
<td></td>
</tr>
</tbody>
</table>
Moreover, students may be informed of any course changes or updates during class. These student prepared logs have the added advantage that they motivate student engagement by treating students as *participants* in a process of change and improvement (Fullan, 2001b, p. 159). Additionally, the instructor may choose to meet with student groups during lab sessions before every assignment is due. Questions that the instructor asks of the groups can be of the form: “How are you? What have you learned? How can I help you move your project forward?” As the course progresses, it is expected that these meetings will in turn enhance the rapport with students and so lead to more illuminating formative feedback both during these meetings as well as in the reflection logs.

To ensure reliability, trustworthiness, and validity, the instructor may choose to adopt the two main strategies that Delamont (2002) proposes, respondent validation and triangulation (p. 180). In terms of the former, the instructor asks clarifying questions that may begin with “So what you’re saying is…”. In terms of the latter, the instructor

<table>
<thead>
<tr>
<th>Goal</th>
<th>Coded indicators (culled from student reflection logs)</th>
<th>Measures taken to improve course form and content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other comments</td>
<td>Have students suggested any ways to improve learning in this course? Are there any patterns that can be generalized?</td>
<td></td>
</tr>
</tbody>
</table>

Table 7 (continued)
employs Delamont’s (2002) categorization of the three main types of triangulation: (a) Between method, (b) between investigators, and (c) within method (p. 181).

Specifically, for between method, the instructor conducts interviews and anonymous surveys that would ideally include a ‘short answer’ written section. For between investigators, the instructor may ask another colleague or a graduate student to function as a ‘counter-check’ by conducting some of the interviews. This also helps prevent potential “researcher effect” (Miles & Huberman, 1994, p. 266). For within method, the survey questions can go into greater detail for each of the points raised in the interviews. While conducting interviews, it is helpful to keep in mind that the interview itself is a form of conversation, and to not be disconcerted if the conversation does not proceed linearly at times. That being said, the locus of such an interview ought to be ‘spiraling’ towards a center. To achieve such an end, it is necessary to stay alert to responses that may prove surprising, and to adopt a ‘grand tour question’ (Shank, 2002, p. 42). A ‘grand tour question’ can take many forms. Some examples include:

1. What does it mean to you to be a student at this institution?
2. What media technology devices do you use in your daily life?
3. What types of media technology have you encountered in your education?
4. What are your views of the use of media technology in your education?
5. Do you see media technology as a tool for evangelization?
6. Has media technology changed your attitude? If so, how?
Periodic assignments and projects are reviewed with the standards outlined in a rubric (such as the rubric example in Appendix C). These would serve as a check for congruence between curriculum and assessment (English, 1980, p. 12).

Implementation and Summative Evaluation Strategies

In terms of instructional effectiveness, since all courses at the university ought to conform to the mission of formation of Catholic morals, this instructional template may be disseminated to other departments at the institution for additional trials. In this way, attitudes, performance, and the organizational impact of learning effectiveness can better be judged and generalized to a wider audience. Expert judgment can take the form of a review of course success with colleagues in the department.

Instructional Efficiency

An end of semester collaborative meeting with colleagues in the department to discuss needs and goals met can determine instructional efficiency (Fullan, 2001b, p. 129). This ensures that course objectives, the objectives of the major, and the mission of the university are all met. In this prototypical example, since the goal of the course is for students to define the Catholic worldview of media technology in education, the objectives of the major that are met include “both theoretical understanding and practical application of mass and interactive media skills in contemporary society” and an understanding of “the social, political, and economic roles of the mass media in society” (Franciscan University of Steubenville course catalog, 2004–2005). Additionally, the institution’s mission statement affirms the goals of the lesson in its purpose “to promote the moral, spiritual, and religious values of its students” while giving a “special emphasis
to the development of leaders for Christ and the Church through teaching programs and experiential learning situations” (The mission of Franciscan University of Steubenville, n.d.).

Benefits of Instruction

A summative evaluation employed in such a course can be utilized as a formative evaluation to the next course, and to support research studies that seek to define characteristics of effective media technology integration in Catholic education. In this prototype course, standardized assessment forms that are currently in use by the institution may prove useful as summative tools especially if these forms require the instructor to define course objectives that are in turn correlated to the students’ evaluation of the course. The final capstone project with the overall scores and grades (via rubrics similar to Table 5), and with the use of performance assessments via student portfolios, can help inform the benefits of instruction within summative evaluation (Heinricher et al., 2002).

Student Portfolios

For this course example, the goals for constructing a student portfolio (Juniewicz, 2003, p. 74) are (a) to create a “personal learning experience, powerful in the kind of reflective process it fosters” (Lyons, 1998, p. 17) and (b) an encouragement for “the reconnection between process and product” (p. 36). The interconnectedness is especially important in this lesson because while the product (the student portfolio itself) motivates by giving students a tangible goal and a sense of personal accomplishment (Garthwait & Verrill, 2003, p. 24), the process of creating the portfolio itself is a gathering “body of
evidence of one’s learning and competence” (Lyons, 1998, p. 19). To meet the vision of the seven keys framework, student portfolios for this lesson ought to comprise of at least the following components: (a) a text document in Microsoft Word (.doc) or rich text format (.rtf) that lists five definitions for Catholic media technology engagement together with quotes, citations, references, and group reflections on how and why those definitions were chosen; (b) individual student reflection logs that have been assembled into group reflection logs; (c) original electronic versions of researched, referenced works collected; and (d) a multimedia presentation that may take the form of websites, video clips, audio clips, or an interactive program.
Next Steps

This prototypical course is designed to provide students with practice in critiquing and conceptualizing definitions using not only scripture and magisterial documents that parameterize the nature of media technology, but also by using contemporary reported literature on media technology applications in secular education. If this seems too rigorous a standard for Catholic education, consider the alternative. If this course were poorly designed, then any future comparison with poor or mediocre instructional practice will likely result in an increase in performance, giving an inaccurate evaluation of instructional and learning effectiveness. You can probably think of many other fields, such as medicine and engineering, in which a process would be unthinkable that did not include a rigorous and systematic development. Why should Catholic education with media technology integration be any different? Surely, Catholic stakeholders and decision makers acknowledge that God deserves the best from His children.

It is my hope that participants would mirror and practice the method presented here so that the meanings of the seven keys, which undergird the worldview for engaging media technology, may be revealed. After all, this instructional technology lesson is part of an overall vision to ‘create’ Catholic educators who reflectively and actively infuse media technology in their instruction. It is further my hope that this instructional design plan serves as a preliminary step not only in defining the role and purpose that media technology plays in Catholic education, but may also serve as a template for integrating media technology in other subject areas in Catholic education. It might function as a beginning course that sets the tone and thinking, as well as helps define the worldview for
Catholic educators in other disciplines. At that point, further research and studies in various appropriate settings and conditions can speak to the effectiveness of the instructional design template. Any feedback can then be implemented as formative change to the plan. Lastly, the example guiding questions for the seven keys were merely that – examples. It is my hope that depending on circumstances, environments, and differing needs, additional guiding questions may be created to build upon this seven keys media technology engagement framework.
CHAPTER V
JOURNEYING FORWARD

In deriving and explicating the seven keys framework, I have set up a structure that allows further building upon. This framework tapped into the principles and conversations in educational technology, and drew upon what others have done effectively in instructional design to create an instructional technology lesson prototype that was modified and tailored to meet the precepts of the Catholic worldview.

Moreover, Pope John Paul II (2005c) identified formation, participation, and dialog as three necessary steps for media technologies to be at the service of the common good of society (para. 11). While formation and dialog constitute an essential part of the educational process, participation additionally demands that there is fostered “a spirit of cooperation and co-responsibility with vigorous accountability of the use of public resources and the performance of roles of public trust, including recourse to regulatory standards and other measures or structures designed to effect this goal” (Benedict XVI, 2006, para. 4). The seven keys framework is a means with which to direct formation and dialog by (a) providing an essential platform on which to build media technology learning and (b) by offering a shared language for communication. And where participation requires assessments of accountability and regulatory standards, the seven keys framework proposes a basis with which evaluation guidelines and structured standards can be built.

The seven keys framework is not so much prescriptive as it is a catalyst for conversion (or proper orientation) and integration. It is the compass, and together with
the instructional map illuminated by the flashlight of scripture and the magisterium, Catholics have the means with which to embark on the journey to engage media technology with vigor. At the same time, this means that there is still more that needs to be done. Much more.

One of the next steps in journeying forward is empirical testing. For example, the seven keys framework should be tested and studied in different disciplines and under various settings. Findings from the various field studies should then be compiled for examination and any overarching patterns need to be analyzed and identified to better comprehend media technology engagement under an assortment of conditions in Catholic education.

We also need to steadily, if not rapidly, follow the orientation of Catholics and teachers with the actual content preparation of instructional media and lessons that will be used in schools and classes. And because education constitutes a significant way to engage media technologies, I believe that in order for Catholics to be prompt in reclaiming media technology as gift from God, modifying existing lessons through applying the seven keys framework ought to occur even as Catholics are coming to terms with the seven keys framework itself. I envision working with other Catholic educators in applying this seven keys framework (and its particular form of orientation found in the instructional technology prototype) to the planning stages of a humanities class, for instance, to decide if, when, and how media technology is to be engaged. Then as the course is implemented, formative and summative feedback (which is an integrated part of the instructional technology design plan presented in chapter four) must be collected,
analyzed, and used to inform further decisions, modifications, and enhancements to the lessons. Only in so doing, can Catholic education continue to improve, and through sharing these findings with the community can Catholic educators be the scriptural light on a lamp stand (e.g., Matthew 5:14-15, Mark 4:21, New American Bible).

What Other Paths Are Possible From Here On In The Journey? Where To Next? What Are Some Potential Possibilities For Using These Seven Keys?

Even today there is a great deal that must still be learnt about the present media and how the fullest use can be made of them, in education particularly and indeed at every level…. it is necessary to concentrate on a rigorous programme of scientific research. Indeed, a much greater effort than that now being made is required of all the concerned parties in furthering this research….For her part, the Church wishes to let researchers know how eager she is to learn from their work in all these areas and to follow out its practical conclusions. Thus she herself may the better serve the process of social communication and use its means to the best advantage of all men. In this connection, it appears necessary to discover through scientific research the true effectiveness of the Church in the field of social communications. It will then be possible to deploy her resources so that they suit the importance of the tasks she faces throughout the world. Catholics will then find it easier to start new projects that match the ever growing importance of the media. (Pontifical councils, 1971, para. 184 – 185)

In terms of efforts to answer this conciliar call, how far have we progressed since 1971? How would you assess today’s practical actions of responding with “greater effort”
to “concentrate on a rigorous programme of scientific research” (para. 184)? The Church as mother, mater ecclesia, gives and will continue to give her utmost support for our journey. Will Catholics, and in particular parents and educators take up the charge? This seven keys framework is a response to the call to research “the true effectiveness of the Church in the field of social communications”. Such a framework not only provides direction to initiatives, but can also help structure studies and provide assessment policies. In education, instructional design principles may be built upon the seven keys framework to create lessons that necessarily have a clear Catholic sense. Existing Catholic media technology instructional design plans and courses may be categorically assessed and evaluated on each of the seven keys. There is a distinct need for empirical studies in various disciplines, under different conditions and environments to determine the appropriateness of media technology integration. With a common framework, we have a common language with which to make comparisons and with which to begin discussions. We might examine subjects that generally are not thought of as media technology rich courses, the humanities, for example, and ask within what sort of lesson plans media technology engages and motivates students, and when on the other hand it might be mere novelty. We might look at religious catechetical education or the teaching of philosophy and theology and ask when media technologies are useful and when it would be more of a distraction from lineal discussions. Equally enlightening perhaps, a longitudinal study can reveal if students in a class with media technology employed appropriately, as outlined in the seven keys, results in “long-lasting value” for students (Means, Haertel, Wagner, & Javitz, 2003, p. 230). Such a study would benefit greatly
from a well grounded conceptual framework (Means & Haertel, 2004, p. 64). On a larger scale, in order to guide these classroom level efforts, the seven keys framework can be used to create instructional and information technology (IT) plans that uphold and actively empower institutions to live out the Catholic identity and philosophy of life (Ong, 1990, p. 347). Moreover, the seven keys framework can be used as a standard in accreditation of Catholic school programs and educational practices. How appropriately is media technology integrated in such courses? Do such courses support the scriptural and thus magisterial principles inherent in the seven keys? An integrated assessment system can enable policymakers and content creators to initiate and evaluate new programs to “match the ever growing importance of the media” (Pontifical councils, 1971, para. 185). In the case of virtuality or virtual worlds too, there is a need for continuing study of the unity that must exist between the immanent (virtual) and the incarnational (corporeal) reality. Perhaps the seven keys framework, in which the concept of virtuality is nascent, may prove useful as a structure to build practical discussions upon.

The seven keys framework can be employed to help reveal a personal media technology usage pattern and determine a proper personal orientation to media technologies. For example, on a daily basis, how balanced are you in your time spent on the different forms of media technology? What are your attitudes towards keeping up with the latest media technology devices and applications? How much would you spend to do so? You might also consider whether you continue to develop your media literacy skills in order to adequately judge media content, and so use conversations about media
technologies to help others build bridges to authentic faith? The seven keys framework can become a scaffold with which to ‘hang’ information that one encounters about new media technologies.

Another major thrust in media technology development and engagement is the increasingly widespread ability for anyone with a computer and some peripherals to create media content that can in turn be shared with vast numbers of people through the Internet, podcasts (Zenit, 2006, para. 11), and even up and coming TV networks that openly encourage you to “pick up a camera, shoot a story, send it in, and – perhaps – have it broadcast nationwide in heavy rotation” (Tomich, 2006, p. 38). Particularly for young adults and the ‘pod crowd’, short form personal media creations are more than just a past time, swiftly becoming not only the norm, but also an expectation from peers. The pressure to remain connected motivates and propels these shared personal media creations. How should young adult Catholics respond? By now, having read thus far, I hope your answer is not in shunning media technologies, for by so doing, Catholics would fail to be actively in the world as witnesses. To help others build bridges to authentic faith requires active participation in the sphere of media technologies. As a conceptual framework, the seven keys are the foundation with which to create all at once powerful, personal, and authentically Catholic media.

The creation of animation or movie-type content is but one aspect of increasingly widespread media that is designed on both a personal and a corporate level. We have spoken of the exploding ubiquity of computer games and software design in chapter two. From modding popular video games to designing and programming shareware that
competes with established commercial software, there is a rapidly growing culture of enthusiasts who design and create computer games and applications using easily available software such as Flash, and even uploading how-to type game tutorials for others to learn from (see for example Gee, 2003, p. 194; Poole, 2004, p. 2; see also Sethi, 2005). Young Catholic creators can employ the portability, accessibility, and adaptability of the seven keys framework to guide their vision in these media forms. In this way, they can create with full liberty and confidence that the Catholic precepts are considered (and hopefully, effectively implemented as well). And so can their parents. Yet again, there is neither need nor encouragement to be moralists, nor to re-present sappily romantic and hence artificial visions of Christianity. Instead, by a lived experience that is authentically Catholic, a personal and unique vision of the world and of life can be genuinely presented: imagine, as an example, profiling peers who demonstrate courageous and admirable behavior (cf. Tomich, 2006, p. 41). Using the seven keys framework, a young Catholic can, for example, ensure that the media technology he or she creates will meet the dimensions of faith with a depth and a ‘coolness’ factor (p. 41) that does not disappoint.

In the public sphere, these seven keys can help create or even function directly as a rating system for media technologies: movies, computer games, educational, and instructional software, to name a few, are in need of a framework that allows a shared language suitable for comparisons. So, while each of us may come up with different criteria for discussing a movie, for example, a common framework empowers communal discussion and understanding. For instance, a movie can be rated on each of the seven
keys to get a sense for the quality of a movie as seen through the lens of the Catholic worldview. Does the movie portray balanced viewpoints? What attitude or position does the script expose? Is human dignity upheld? How truthful or how accurate is the portrayal of the moral reality? Does the movie inspire hope? Does it raise questions that inspire one to search for answers? How professional is the movie’s execution? Who is the primary audience and how successfully does it connect with the audience? How immersive is the experience? Just as experience is used to aid the judgment of reality, so too, a movie’s script, its lighting, its photography, its editing, all the detailed elements of its execution crafts, directs, and shapes the experience. This experience, because it has the potential to powerfully shape our understanding of reality, needs to be respected and responsibly assessed.

The seven keys framework may be applied in evaluating other common media technologies: websites, for instance. Questions that might be asked in evaluation include: How balanced are the perspectives? What is the attitude, stance, or intent of the website? How truthful is the content as considered against a moral reality? Does it debase or appeal to personal ideals? Does the design of the website attract? How is the execution? Does it demonstrate graphic design skill and professionalism? How does it engage the audience? Does it successfully employ the tactile-interactive sensory-experience? Is it relevant to the audience’s needs? Does the website use the medium effectively by grappling with the tensions between the literate and the experiential? For example, one can read text on computer screens, even whole books. Yet at the same time, one of the most difficult places to read text is on a monitor (for example, Williams, 2004, p. 120).
As such, what is the website’s balance between the lineal mode of thinking and the sensory-experiential? Perhaps, with the proliferation of religious websites and bloggers (Zenit, 2006, para. 9), to increase the reliability of information, these websites might categorically show how the information contained therein builds upon the seven keys framework.

Take the rating of video, console, and computer games as another example. Currently, the Entertainment Software Rating Board (ESRB), established in 1994, is the main organization that “independently applies and enforces ratings, advertising guidelines, and online privacy principles adopted by the industry” (Entertainment Software Rating Board, n.d., para. 1). Yet note that the rating system is not only voluntary, but also that the ESRB is self-regulatory. “In rating a game, ESRB considers many content areas, including but not limited to violence, sex, language, and substance abuse” (para. 5). While these limited content areas are very important to consider, the Catholic worldview looks at the total vision of the human person. What if Catholics used the seven keys framework to rate video and computer games? The seven keys framework has the advantage of not being specific to any particular media technology. Instead, the framework is focused on the proper orientation of media technology to a reality that is grounded on moral principles, and that appeals to human dignity and the common good. The questions of whether a video or computer game upholds the dignity of the human person or serves a communal good (cf. John Paul II, 2004, para. 5) is not often considered in secular media technology ratings. Perhaps the seven keys framework can fill this need.
Furthermore, Pope John Paul II’s (1997) *Theology of the Body* describes three conditions of human experience: original Man, historical Man, and eschatological Man. Original Man refers to the state of humanity before the Fall, when the worldview was lucid and the lens with which we looked at life clear and unblemished. This seven keys media technology engagement framework, buttressed by studies of the Catholic worldview, provides a clearer picture than the alternative, which is the secular worldview that tends to be one that ignores or trivializes the sin-affected view we are limited to because of the Fall. Historical Man refers to humanity after the Fall, but redeemed by Jesus Christ. In this state, we need to account for how concupiscence affects and restricts us, our culture, our perceptions, our education, and our use and applications of media technologies. At the same time, because of the redemption, we are freed to explore the truths and possibilities that media technology affords to humanity. And this freedom is authentic because of the boundaries given to us in scripture to keep us true to our humanity and our calling. Imagine a plateau with sheer and precipitous cliffs all around which drop sharply off into the abyss. Without adequate boundaries, playing freely on such a plateau is dangerous, and to do so is foolhardy. With ample boundaries, we are at liberty and encouraged to be truly free in our play. Are we using this freedom to engage media technologies? Are we acknowledging the boundaries so that our integration of media technology in education is true to human dignity and is intended for the common good of society? Are we willing to let these boundaries guide our research and our studies? The third condition, eschatological Man, refers to the resurrected state that we are called to have in heaven in the *parousia*, in the presence of the Trinity and the Church
resplendent. To acknowledge that we have this calling is to have a telos, and thus a motivation and responsibility to seek moral directions for culture, for education, and for media technology engagement. We need to equip the next generation to reclaim media technology as God’s gift to us, and so to apply media technologies with accurate grammar and proper language in the public square. As part of this endeavor, we can utilize the seven keys framework to help us decide on the best direction and course of action, to set objectives, and to assess our activities with a common framework. As educators and parents, we need to prudently identify and encourage our children and students to develop media technology talents and skills. Only with openness to the grounded morality of this framework, can we perceive and so apply media technologies in the fullness of its value and how it has been ordered in reality.

The great predicament of the democracies is the fact that they had lost intellectual faith in the truths that constitute their very soul and their very principles….If we are to overcome this predicament, our intellect must seize hold of these realities. In other words, what we need first of all is a renewal both of metaphysics and of morality, backed up by faith in the Gospel. This is true in the general field of culture; it is especially true in the field of education. (Gallagher & Gallagher, 1962, p. 181)

Will educators openly embrace this renewal? McLuhan (1964) points out that “in the country of the blind, the one-eyed man is not king. He is taken to be an hallucinated lunatic” (p. 333). Will faith be allowed to inform education? Standing at the crossroads, this dissertation is an invitation for you to journey forward in grappling with media
technology engagement, now with the aid of a compass and a framework to build on. Perhaps this first exploratory step will raise questions that touch upon and challenge our notions and understanding of the fundamental purpose of education itself. Perhaps the real question is: Will educators and policymakers allow these seven keys, which are grounded on Catholic thought and morality, to transform the way we integrate media technologies in education?


*Franciscan University of Steubenville course catalog.* (2004-2005). (Available from Franciscan University of Steubenville, 1235 University Boulevard, Steubenville, OH 43952)


Hess, M. E. (2002). Pedagogy and theology in cyberspace: "All that we can't leave behind..." *Teaching Theology and Religion, 5*, 30-38.


Joseph & R. J. Nuzzi (Eds.), *Handbook of research on Catholic education.*
Westport, CT: Greenwood Press.


http://www.simpletoremember.com/vitals/einstein.htm

July 1, from http://www.kff.org/entmedia/3271-index.cfm

*Instructional Design Theories and Models: An Overview of Their Current Status.*

Kemmis, S. (2004). Exploring the relevance of critical theory for action research:


Saint Louis University. (2003). *The life and scholarship of Walter J. Ong, SJ: A
digital archive at Saint Louis University*. Retrieved November 14, 2005, from
http://www.slu.edu/colleges/AS/ENG/ong/

October 24, 2005, from
http://www.vatican.va/roman_curia/congregations/ccatheduc/documents/rc_con_c
catheduc_doc_19770319_catholic-school_en.html

The Sacred Congregation for Catholic Education. (1982). *Lay Catholics in schools:
Witnesses to faith*. Retrieved October 24, 2005, from
http://www.vatican.va/roman_curia/congregations/ccatheduc/documents/rc_con_c
catheduc_doc_19821015_lay-catholics_en.html

The Sacred Congregation for Catholic Education. (1988). *The religious dimension of
October 24, 2005, from
http://www.vatican.va/roman_curia/congregations/ccatheduc/documents/rc_con_c
catheduc_doc_19880407_catholic-school_en.html

The Sacred Congregation for Catholic Education. (1997). *The Catholic school on the
threshold of the third millennium*. Retrieved October 24, 2005, from
http://www.vatican.va/roman_curia/congregations/ccatheduc/documents/rc_con_c
catheduc_doc_27041998_school2000_en.html


Appendix A

Biographies of a selection of modern Catholic thinkers
Biographies of a Selection of Modern Catholic Thinkers

This section briefly highlights and recounts the lives and work of a select number of individuals who have contributed significantly to the Catholic worldview in the fields of education and/or media technology. While many more such modern Catholic thinkers have made their mark in our contemporary history, and have in that sense contributed to the thinking that created the seven keys framework, due to practical considerations I have chosen to limit this appendix to only those who have influenced major portions of the framework itself. This choice was by no means an easy one as I am indebted to a much larger body of thinkers in the communion of saints who have, each in their own special and unique way, added a piece to the puzzle. With their understanding, and yours, I present a brief look at some significant aspects of the following individuals’ lives and work that have made this analysis and conceptual framework possible.

*John Paul II*

Possibly the most written about pontiff in history, Pope John Paul II (1920 – 2005) has made an indelible mark on the lives of many people in the world today. Evidence of this can be found in the numerous articles, anecdotes, and books (even comics) written about this humble man of Poland – making it all the more difficult to write a *brief* biography. Not by power nor politics did he exert his influence as much as by his love for each human person’s dignity, and in so loving, inspiring peoples to respect themselves and others. By faith and example, by his dedication to the service of others, and by his devotion and trust in God and the Blessed Mother, did he inspire the faithful in their prayer and work. Born Karol Josef Wojtyla, this was a man with many attributes: he
enjoyed outdoor sports as much as he did acting in the theatre, writing poetry and plays, and reading whilst contemplating his faith. He was a scholar, a professor who held two doctorates, one in moral theology and another in philosophy, and the Chair of Ethics at the Catholic University of Lublin in Poland. He spoke eight languages, traveled to 130 countries, canonized 482 saints, beatified 1338 faithful, met with more than 17.6 million pilgrims at Wednesday audiences (not counting other special audiences, heads of state official visits, and the more than 8 million pilgrims during the Great Jubilee of the Year 2000), wrote five books, 14 encyclicals, 15 Apostolic Exhortations, 11 Apostolic Constitutions, and 45 Apostolic Letters, all over and above numerous other communiqués (for example, the Wednesday audience teachings, some of which were compiled into the *Theology of the Body* text). Take a look at how one of many biographies of Pope John Paul II begins; this one is posted on the United States Conference of Catholic Bishops website:

> The world knows Pope John Paul II in different dimensions: manager, missionary, statesman and prophet. His message is not always easy and his words are not always welcome. But it’s hard to imagine a more influential figure on the global scene over the last twenty-five years. If his pontificate seems a perfect match for our age, perhaps it’s because he experienced its joys and trials firsthand – as no previous Pontiff has. (Thavis & Walsh, 2003, para. 2)

John Paul II’s portrayal of the Catholic worldview, evidenced in his numerous writings and communiqués, greatly supported the development of the conceptual framework for the seven keys. With a scientific-experimental mindset that tends to
reduce what is real to only what is measurable, our culture has progressively formed a society that measures progress predominantly in terms of material wealth. And within such a materially wealthy society made more so by the rapid development of technology (McGovern, 2003), Pope John Paul II introduced his interpretations of Christian personalism. This was a worldview that at once affirmed the dignity of every individual human being while it concurrently asserted the necessity for communion with one another in the Church. George Weigel (2001), author of the New York Times Notable Book *Witness to Hope: The Biography of Pope John Paul II* said this of the Holy Father’s vision for a troubled world: “The threshold of hope, the threshold of human dignity, is not crossed by lowering the bar of the moral life, but by reaching higher – and then, if one has failed, by reaching higher again” (p. 691). John Paul II strove to tear down any perceived walls between the Church and the world, and to make faith an integral experience of everyday living. He did this by juxtaposing and upholding the traditions and truths of scripture with careful observations and descriptions of contemporary experiences.

His love for education and for students is equally notable. Father Wojtyla was affectionately called “Uncle” by many of his students when they would go on hikes together in the wilderness to talk about life, its meaning, and its relevance to them as individuals. Certainly, this practice of calling him their “Uncle” began because the communists forbade priests to lead youth groups. But the students shared much of their lives willingly with their beloved “Uncle”, inspired and attracted by how “he preached a warm Christianity, not a forbidding one, and threw his mystical and intellectual ideas into
the mix” (Sullivan, 1999, p. 30). He established the World Youth Days (19 were held during his pontificate) which brought together millions of young people from all over the world. His many communiqués, especially those that dealt with media technologies, advocated education as key to cultural reform and societal improvement.

This was a media savvy pontiff. In the early years of his papacy, he steered the Vatican into using satellite transmission and producing videos, and was adroit at using the mass media to proclaim the Gospel messages. Media coverage of his efforts for pastoral and evangelizing visits became the norm during his pontificate. PBS Frontline comments on his media usage, citing Monsignor Lorenzo Albercete, a friend of John Paul II:

John Paul II knows that no one reads the encyclicals of a dead Pope. They will die with him. He knows that intellectual arguments don't persuade, that you have to be given these Pentecostal moments of having been touched by grace. That is why he has taken to the streets, to bear witness to the reality of his faith. His motorcade is a stunning show and he is the drama at the center. It can only last a minute, but you'd think people had ten hours of the most intimate mystical experience. For many people it is that one moment when they say “I saw another possibility in life.” That is why the Pope uses every media toy of our age – CDs, cameras, videos, visits that are beautifully orchestrated. (Barnes & Whitney, n.d.)

When he died on April 2, 2005, the Octave of Easter and Divine Mercy Sunday, more than 3 million pilgrims came to pay homage. Perhaps the following insightful observation about Pope John Paul II by a journalist who had converted to the Catholic
faith from “the fashionable atheism of the intellectual class” best describes the faith, works, and life of this Holy Father: “This is not a Pope from Poland; this is a Pope from Galilee” (Weigel, 2001, p. 258).

All the sentiments of witnessing John Paul II’s faith, all the intellectual logic of his treatises, all the images of him in the media, and all my own studies of his thought and philosophy culminated in a brief audience my wife and I were fortunate to have had with this Pope. Looking at him, at his blue eyes, hearing his blessing on my wife and I, holding his wrinkled but strong hands, I understood the effect he has had on so many people in the world. This man was present to me, to us, in a way that let Christ through, a sign that pointed to, a medium and message that communicated the love of God for his children.

Luigi Giussani

Monsignor Luigi Giussani (1922 – 2005) has been called a “defender of man’s reason” and a “master of mankind” (Catholic World News, 2005b, para. 3). While growing up, Giussani’s father instilled and encouraged in him a desire for justice, learning, and reason, as well as a love of beauty through art, poetry, and music. Consequently, Giussani came to understand even ‘secular’ works of art and music as expressions of the religious sense, which is a created capacity in all of us, and thus an experience, however uninformed, of the person of Jesus Christ.

From 1954 to 1964, Fr Giussani published many articles for journals “aimed at drawing attention both inside and outside the Church to the problem of education” (Communion and Liberation Official International Site, n.d., para. 6). He became the
founder of the international Communion and Liberation (CL) movement, which seeks to bring greater awareness of the concrete personal encounters with Jesus Christ in the ‘ordinary’ reality of daily life. Today, CL is actively represented in more than 70 countries throughout the world. Nevertheless, Fr Giussani never considered himself the originator of the CL movement. On CL’s 50th anniversary in 2004, Fr Giussani wrote to Pope John Paul II:

I have never 'founded' anything. I maintain that the genius of the movement whose birth I witnessed is that it felt the urgency of proclaiming the need to return to the elemental aspects of Christianity. By this I mean a passion for Christian reality as such in its original elements, and nothing more. (Magister, 2006, para. 5)

Acknowledging the relevance of the movement to our day and culture, Pope John Paul II praised the CL movement for providing an “experience that profoundly changes people's lives,” while acting as an antidote to the “widespread tendency toward relativism, skepticism, and nihilism,” and helping to prepare Catholics for the “new apostolic duties of the third millennium” (Catholic World News, 2005a, para. 5).

Fr Giussani died in Milan at the age of 82 during the night of Tuesday, February 22, 2005. His care for and work with the young, his many writings about faith and about education, and his enthusiasm for a concrete experience of reality and thus of Jesus in one’s daily life helped steer the conversation on experience in education within the seven keys framework. For instance, Fr Giussani expressed great concern that the church was increasingly “identified with political and diplomatic cunning” and
instead of a Catholic presence, there was an increasingly tired and abstract
closing in upon oneself in the offices of the associations, while the concrete lives
of the young people themselves lined up to follow the current ideas. Or, instead of
the Catholic presence, there was intellectual interpretation… (Magister, 2006,
para. 32)

He was of a mind that the task for us in education was a simple one: to bring
students closer to the reality of the person of Jesus Christ by encountering their faith in
the real experiences of their own lives as well as by cultivating a longing for concrete
truths (e.g., Giussani, 1995, p. 9, 15), and thus to avoid ‘artificial’ forms of “sentimental
traditionalism” and “abstract appreciation” (Giussani, 1995, p. 83).

Fr Giussani proposed that “both the aesthetic and ethical sense arise from a
correct and impassioned clarity concerning ontology, and that a lively aesthetic sense is
the first sign of this, as evidenced by the healthiest Catholic as well as the Orthodox
tradition” (Communion and Liberation Official International Site, n.d., para. 4). This
helped to crystallize the question of what media technology’s proper orientation is, both
in daily engagement and in education. Consequently, such a line of reasoning led
logically and naturally to the discussion of the experiential dimension of media
technology and learning, as well as the purpose of the educational process itself. Fr
Giussani’s educational thought calls for critical thinking, a vigor for the engagement of
problems, and the cultivation of continued curiosity in the search for truth. This is
especially evident in his proposal that criticism today has unfortunately been reduced to
negativity,
so that everything we are told appears doubtful…[when] in fact, a doubt puts an end (possibly temporary) to an inquiry. A problem, instead, is an invitation to try to understand what one is faced with, to discover a new good, a new truth, to extract a more mature and deeper sense of satisfaction. (Giussani, 1995, p. 10)

Accordingly, each of Fr Giussani’s educational components is ordered in reality: without tradition that functions to give “a hypothesis of meaning; a life experience that offers the reasons for this hypothesis; and criticism – young people will be like fragile leaves separated from the tree” (p. 11). Fr Giussani’s line of reasoning brings focus to the broad contemporary definitions of experiential education: “He had only one great concern: to transmit the experience of Christianity to everyone.” (Magister, 2006, para. 7).

Jacques Maritain

An eminent Catholic philosopher of the 20th century and a distinguished teacher, Jacques Maritain (1882 – 1973) wrote numerous treatises on the nature and philosophy of education, the theory of knowledge, and in particular, on the task of Catholic education as focused on the reality of what it means to be human created in the image and likeness of God. Specifically, he encouraged educators to be more conscientious about telos and the goals of education than about techniques, and with the education of the whole human person rather than a focus on mere aptitudes (Maritain, 1943, p. 3). While Maritain’s philosophy interpreted much from the work of St Thomas Aquinas, at the same time in order to better to support learning, Maritain insisted upon the great good that can be
drawn from contemporary findings in the fields of psychiatry and psychology, for example, which aid in understanding the psychosomatic nature of the human person.

Maritain’s own studies led to his conversion to the Catholic faith. He was raised a Protestant, but together with his Jewish wife Raissa, who collaborated with her husband on many texts and was an intellectual and writer in her own right, converted to the Roman Catholic faith two years after their marriage in 1904. Their conversion was precipitated by the spiritual lassitude and aridity of the French intellectual life in which they were immersed at the time. In fact, the Maritains had “made a vow to commit suicide within a year should they not find some answer to the apparent meaninglessness of life” as presented to them (Sweet, 2004, para. 2). Through their searches, reading, and study, the Maritains chose and sought to be baptized Roman Catholic. It is probable that because of this struggle in the journey to their chosen faith, Maritain later expended considerable effort in defending Catholic philosophy, and in particular Thomism, against secular interlocutors.

Maritain was a professor of philosophy at the Institut Catholique de Paris, but moved to the United States on a lecture tour when the Germans overran France during the Second World War. He remained in exile in the United States for the duration of the war, teaching at Columbia University and at Princeton, as well as contributing to the war effort through the Voice of America and additional broadcasts destined for occupied France. After the war, he served as the French ambassador to the Vatican and was keenly involved with the drafting of the 1948 United Nations Declaration of Human Rights before returning to a full time post at Princeton as Professor Emeritus. Though he also
Maritain continued to be invited to various universities in the United States to lecture, notably at the University of Notre Dame, Maritain remained absorbed in his writings and traveled frequently to France to give short courses on philosophy. At Princeton, Maritain continued to teach until the death of his wife in 1960 whereupon he retired to the Little Brothers of Jesus monastery in Toulouse. He stayed there, still authoring a number of books, until his death at the age of 90 on April 23, 1973.

Maritain’s epistemology and philosophy of education helped form structures of the seven keys framework. Because Maritain was concerned about religious orthodoxy, his writings went beyond a rehash of Thomist philosophy to address issues of relevance to contemporary education and culture. Maritain’s views of the unity of faith and reason and the connectedness of all knowledge contributed to the policy of balance in media technology integration. His argument for human dignity and thus personalism as the via media between individualism and socialism helped shape ideas for the proper employment of media technologies toward the common good of society. His was a theocentric and integrated humanism, as it were, that sought to bring the various dimensions of being human, and of education, together without diminishing the value of the individual elements (Sweet, 2004). “The significant thing,” Maritain said, “and what causes our approach to be Christian, is the perspective and inspiration, the light in which all this is viewed” (Gallagher & Gallagher, 1962, p. 135).

Marshall McLuhan

Famous for aphorisms such as “the medium is the message”, and coined expressions such as “light-through [media]”, “surfing [information]”, and “the global
village”, Herbert Marshall McLuhan (1911 – 1980) was an intellectual, an author, a literature professor at St Michael’s college (part of the University of Toronto), and a pop culture icon-luminary who, in the 1960s, had much to say about the effects of media technologies on society and on the individual person. Perhaps less known or less focused upon in the media of the flighty and swinging sixties was that McLuhan, by his mid-twenties, had converted to the Roman Catholic faith. He was serious about his faith, and he was also much captivated by the writings of St Thomas Aquinas and G. K. Chesterton (McLuhan, 1999, p. 3). It was precisely McLuhan’s faith inspired vision and his many media and written works that greatly bolstered the construction of the seven keys framework. For example, as much as McLuhan appraised the media form and its power as ‘extensions of man’, he also noted the potential for global media technology consciousness in obscuring human dignity. His sense of the need for a focus on the individual human person (notice how McLuhan’s employment of his phrase ‘extensions of man’ presumes a discussion that begins with the human person first even before speaking about any ‘extensions’) may be evidenced in his involvement with the pro-life and march for life movements, and can be seen in this quote about human life in a July 24, 1974 letter to the Toronto Star:

It is important to realize that all of our thinking about abortion is taking place in the smogged-over world of TV. It is becoming monstrous to even mention the individual rights of the born, or the unborn…only huge categories will serve, such as the rights of pregnant teenagers…” (Molinaro, McLuhan, & Toye, 1987, p. 503; see also Bole, 2001, para. 15)
In terms of the virtuality of the media technology forms, McLuhan was concerned about how media technologies could render the human being bodiless, disincarnate as it were, that “much of his [modern man’s] own sense of unreality may stem from this,” and that “disincarnate man is not compatible with an incarnate Church” (para. 17; see for example Percy, 1983, p. 141). It is said that McLuhan’s work was “coded theology in the language of the new media. All he discovered was a new metaphor to preach the old truth ” (Mockler & Federman, n.d., para. 3), as is evidenced in how McLuhan understood Christ as God’s ultimate medium and message to humanity (McLuhan, 1999, p. 103). “He felt that an understanding of media could bring spiritual enlightenment to mankind” (Mockler & Federman, n.d., para. 4). In a 1969 letter to Jacques Maritain, McLuhan expressed concern over the rapidity of media technological change, which contrasted with the lack of an attendant prompt response by fellow Catholics. In that same letter, McLuhan also implied that Maritain’s own Art and Scholasticism text “was a revelation” as he read it, and how it helped inspire him to become a Catholic in 1937 (p. 73). Incidentally, Maritain replied with a long letter, written in French, agreeing with McLuhan’s statements, but encouraging comfort in the assurance that the endurance through the centuries of Church doctrinal perspectives was a sign that these were founded on an enduring truth.

In his teaching, McLuhan was frequently connecting the past with the present, and the moral with the social aspects of knowledge: “He took for granted that everything in God’s creation hangs together through all levels and that probing all connections was
worthwhile” (Ong, 1981, p. 135). Father Walter J. Ong, McLuhan’s student at one period, speaks highly of McLuhan as a teacher:

A good teacher is one who can encourage others to think actively. A superior teacher can make the thinking pleasant for the learners. A superb teacher can make the thinking an overpowering activity, delightful even when it is disturbing and exhausting. By these criteria, Marshall McLuhan was a superb teacher who could stir people’s minds. Even those who found themselves baffled or exasperated generally found themselves changed. (p. 129)

By the 1970s, McLuhan was called to numerous speaking engagements, media (TV, radio, newspaper) interviews, as well as invited to guest lecture at many universities around the world. Amidst a host of awards and appointments, McLuhan was also selected to become the director of the Project in Understanding New Media for the National Association of Educational Broadcasters and the U.S. Office of Education in 1959. In 1963, at the request of the president of the University of Toronto, he created a new Centre for Culture and Technology to study the psychological and social consequences of media technologies. Ten years later, in 1973, he was appointed to serve on the committee of the Pontifical Commission for Social Communications. McLuhan died on New Year’s Eve, December 31, 1980 of a cerebral stroke that had rendered him unable to speak during the last year of his life. In spite of this, it is said that he had still been able to sing all the hymns at Sunday Mass (Bole, 2001, para. 27). His legacy is far reaching, given our digital lifestyles of this primary media technology age:
We have interiorized writing and print so deeply that we are unaware of them as technological components of our private thinking processes and we are engaged in rapidly interiorizing the computer in a similar way. Marshall McLuhan is part of this process of interiorization, and we can thank God for that, and for him. (Ong, 1981, p. 135)

*Maria Montessori*

A teacher must not imagine that he can prepare himself for his vocation simply by acquiring knowledge and culture. Above all else he must cultivate within himself a proper attitude toward the moral order. Of vital importance in this preparation is the way in which we regard a child. (Montessori, 1965, p. 45)

I must state up front that it was only *after* the construction of the seven keys framework that I came across the methods of Dr Maria Montessori (1870 – 1952). When my wife was reading up about the Montessori method at the recommendation of a friend, I had glanced at her readings and noticed the sections on the education of the senses – sensorial training. Montessori proposed how the experience was just as important to the learning process as the content of the lesson itself and how “cognition is embedded in action, by virtue of learning through these materials” (Lillard, 2005, p. 79). That caught my eye as I had then just finished describing the concept of SEEs – what I had called sensory experiential events that parameterize the ordered use of media technologies. As I delved into her methods, I found further reinforcements for the seven keys framework. To understand her contribution to this work, a brief description of salient points of her life is in order.
Montessori grew up defying a conservative Italian culture by studying science and ended up becoming the first female physician in Italy. In her appointment as the director of a branch of the University of Rome that oversaw ‘deficient and insane’ children, Dr Montessori witnessed children who were previously confined to their rooms and who were deprived of attention and stimulation. Through attentive observation and care for these children, she developed methods that we might tend to take for granted today. Specifically, Montessori believed that children are competent and able to make their own decisions. She observed how children interact with their environments and found success in furnishing appropriate class work for children of different ‘sensitive periods’. Such work was designed to stimulate and motivate the child with various forms of social interaction, sensorial experimentation, as well as language and mathematical development. Her concept of the total education of the child and of silence not as punishment lent even more weight to the policy of balance in the seven keys framework: “Traditional schooling often provides children with discrete sets of facts that are not usually presented as interrelated,” (Lillard, 2005, p. 146). In fact, it has even been proposed that Gardner’s (1999) multiple intelligences “lie at the heart of the Montessori exercises and activities” (Vardin, 2003, p. 40).

As a result of her efforts, in just two years, some of her ‘deficient and insane’ children were able to pass standardized tests that other ‘normal’ children in the Italian school system took. Though not in the mainstream, many of her methods are still in use today in a growing list of specialized schools. Unfortunately, some of these contemporary Montessori schools, though employing many of her methods, are so commercialized and
expensive that one wonders if they truly understand the meaning and mission of their foundress (cf. The international Montessori index, 2006, para. 1).

In 1913, Dr Montessori made her first visit to the United States and it was then that Alexander Graham Bell and his wife, Mabel, founded the Montessori Educational Association in Washington D.C. Then, while Italy was under the dictatorship of Mussolini and for the duration of World War II, Dr Montessori lived in exile in India largely because she refused to compromise her Catholic faith and her beliefs in allowing children to become ‘little soldiers’. For three consecutive years, 1949 through 1951, Dr Montessori was nominated for the Nobel Peace Prize. She lived out the remainder of her life in the Netherlands, which today houses the Association Montessori Internationale (AMI).

Her educational theories were focused not only on meeting her children-students at their level of experience, but were also grounded on her faith. In describing the meaning of the Roman Catholic liturgy to children in her book *The Mass Explained to Children*, she tells it simply and clearly:

Our Lord Jesus Christ said the first Mass at the Last Supper….You can see this for yourself when you go to Mass. The large furnished dining-room is the church, and the altar there is the table, prepared with its white cloths. A precious chalice stands on it for holding the wine and water, and also a plate containing a round piece of bread. You will see a man, too, standing by the prepared table; he is the priest who represents Christ. (Montessori, 1932, p. 5)
Dr Montessori’s educational ideas and methods did not go unrecognized by the Roman Catholic Church:

In fact, I believe that one can truly say that the great value in the Montessori Method lies precisely in this – that it has rediscovered and put into practice in a wide field that pedagogical method which the Church in her millennial wisdom has always used. (Standing, 1965, p. 107)

_Walter Ong_

Father Walter Jackson Ong, S.J. (1912 – 2003) was a Jesuit priest and a student of Marshall McLuhan. Despite speculations to the contrary about his last name by readers who have never met him nor seen a picture of him, Father Ong’s ethnicity is not Asian, but decidedly European. He was born on November 30, 1912 in Kansas City, Missouri; he entered the Society of Jesus in 1935, and was ordained a Roman Catholic priest in 1946. He was Professor Emeritus and though he taught English and the humanities at St Louis University, his appointment as University Professor reporting not to any department chair or dean, but directly to the University’s central administration called attention to the uniquely inter-disciplinary nature of his work. He served on many educational and scholarly commissions, including being appointed in 1967 to the 14-member White House Task Force on Education under the direction of President Lyndon B. Johnson, and in 1978 he was elected President of the 30,000-member Modern Language Association of America, the largest scholarly society in the world. A prolific author, he was also a visiting professor at many leading universities, including those located in Europe, the Middle East, and East Asia. Additionally, Father Ong was invited
to teach in the prestigious Terry Lectures at Yale University (Other Terry Lecturers have included John Dewey, Jacques Maritain, and Carl Jung). His most widely circulated book, *Orality and Literacy: The Technologizing of the Word* has been translated into 12 languages.

Father Ong’s conceptions have greatly aided the construction of the seven keys framework. His books, and indeed many of his articles have explored the changes in human cultures as they have been affected and influenced by media technologies, and in the same vein, by human patterns of communication and the attendant modes of orality and literacy. Working and writing well into the primary age of media technologies, Father Ong exercised and applied his framework for human communications in observing that because of the nature of electronic amplification, the modern communicator has the ability to address tens of thousands of people at once. Furthermore, the repetitious nature of orality is even more widespread today than it was in the time of primary orality, as evidenced by numerous repeating commercials and advertisements, television program re-runs, and Internet hyperlinks that point back to similar sources. In this sense, the primary media technology age or ‘secondary orality’ as Father Ong called it, is more effectively oral than primary orality itself. Despite his work sometimes being presented alongside postmodernity and deconstructionism, Father Ong’s underlying philosophy has always acknowledged the interrelatedness of knowledge (again, increasingly made apparent by the hyperlinked connectedness of the Internet) and has always remained firmly rooted in the Incarnation and the mystery of God. He frequently called for religious thinkers to attune themselves to a global media technology culture, calling for a
“theology that incorporated modern technology” (Berry, 2003, para. 13). Father Ong’s focus on the relevance of his faith and his work to our circumstances can also be seen in his rather McLuhanesque statement: “One thing I got from McLuhan was that you couldn’t understand the present without the past, and you couldn’t understand the past unless you understood the present, because all your questions come from the present” (Marchand, 2003, para. 6).

At his death on August 12, 2003 at the age of 90, St Louis University’s president observed, “Today we have lost one of Saint Louis University’s, indeed higher education’s, greatest treasures” (Saint Louis University, 2003).

Walker Percy

It might be an understatement to say that Walker Percy (1916 – 1990) had a difficult and troubled start to his life. Percy’s grandfather killed himself with a shotgun and this perhaps was a beginning of a series of tragic deaths in his immediate family. At the age of 13, his father, a successful lawyer in Birmingham, Alabama, committed suicide in the attic of their home with a shotgun. Two years later, his mother drove her car off a country bridge. Consequently, Percy and his two younger brothers were sent to live with their father’s cousin, ‘Uncle Will’ Percy, who was a practicing writer in Mississippi. There, the boys were exposed to a multitude of books, writing, fine art, and music. In 1941, Percy graduated with honors from Columbia University’s medical school and began his career as a medical doctor in New York’s Bellevue Hospital. This path proved to be short-lived as Dr Percy contracted tuberculosis while performing autopsies. It was during his several years of convalescing that Percy read deeply and was challenged
in his understanding of life and in his worldview. The gazette of the University of North Carolina at Chapel Hill, where Percy studied as an undergraduate, chronicles that Percy was to later acknowledge this period of his life as “most fortunate” in that it opened up to him a path and a choice for “a life that he could not have imagined before” (University Gazette online, 2002, para. 41, see also Tolson, 1992, p. 163).

It is likely that this period of study and reflection led to his conversion to the Roman Catholic faith. Percy’s faith was humble as it was real: he was certain that “he had taken the right path, and that new certitude left him feeling profoundly grateful” (Tolson, 1992, p. 203). In an interview with Shelby Foote, a friend of Percy’s from when they were teens and an author in his own right, Foote affirms Percy’s faith: “It gave him exactly what he wanted, and it was a great comfort to him when he was dying, and it was at the wellspring of his being, the Church and its teachings, and he was truly devout” (Academy of Achievement, 1999, p. 4). “Yet no one could have been more surprised than he when he was the sole American to” (Percy, 1991, p. xiii) be invited by the Pontifical Council for Culture to give an address on “Culture, the Church, and Evangelization” in a 1988 symposium held at the Vatican (see also p. 296).

Moreover, Percy’s faith was often interwoven into his books and essays. His writings frequently grappled with the fallen state of the human condition and a search for meaning in a postmodern world. This search took myriad forms: from ideas on semiotics to existential philosophy; from environmental and scientific influences to the nature of media and human communications (for example, Percy, 1954). Additionally, his keen interest in language and human consciousness was likely sparked by the hearing-impaired
condition of one of his daughters, Ann Boyd, and his subsequent readings of Helen Keller. Perhaps Percy the scientist felt the inadequacy of science alone in accommodating the emptiness he believed humanity experienced amidst modern affluence and pleasures. Percy writes: “As a scientist…I knew so very much about man, but had little idea what man is” (Tolson, 1992, p. 177). One of Percy’s recurring conclusions, no doubt through studying his faith, was that “He is a wayfarer and a pilgrim” (Percy, 1991, p. 246, see also p. 369).

For his writings, Percy received many honors and awards. For example, his book, *The Moviegoer* received the National Book Award for fiction in 1962; *Love in the Ruins* received the National Catholic Book Award in 1972; *Lost in the Cosmos: The Last Self-Help Book* received the St Louis Literary Award in 1986; *The Second Coming* received the Los Angeles Times Book Prize, a Faulkner Award, as well as a National Book Critics Circle and American Library Association Notable Book citation. Hardy (1987), in his text *The Fiction of Walker Percy*, commends Percy’s novels: “Few novelists of any time have presented so convincingly…the essential drama of the search for faith. Among Percy's contemporaries, there are none to equal him in this, and only a small company who may be counted his peers in any practices of the art of fiction” (p. 224).

Percy died of prostate cancer at the age of 74 on May 10, 1990. He faced death with dignity and faith: “Don’t ask the Lord to keep me here. Ask Him to have mercy,” (Tolson, 1992, p. 487) he requested, a short time before he died. Yet even as he lay dying, his humor was not lessened as he remarked to his wife: “It’s embarrassing…everybody gathered here and I just won’t die” (p. 487).
It was Percy’s openness and efforts to explore the relationships between the Church and a media saturated society that accompanied me on my journey in piecing together the seven keys framework. Percy asked fundamental questions that echoed and supported my own: “What is the role of the Church in a society increasingly polarized…by the powerful forces of secularism, scientism, and consumerism…? More specifically, given the Church’s love and respect for the truth, including the truths of natural science, how does it proceed in such a society to discharge its commission from the Lord to carry the good news of the Gospel to the ends of the earth?” (Percy, 1991, p. 301). He “suggested that the Roman Catholic Church could more effectively use television in its efforts to evangelize” (p. xiii) in a secularized America. Listen to his cautionary words regarding technology and the human condition:

[With] the fading of Christianity as a guarantor of the self, the self becomes dislocated…is both cut loose and imprisoned by its own freedom, yet imprisoned by a curious and paradoxical bondage like a Chinese handcuff, so that the very attempts to free itself, e.g., by ever more refined techniques for the pursuit of happiness, only tighten the bondage and distance the self ever farther from the very world it wishes to inhabit as its homeland….Every advance in an objective understanding of the Cosmos and in its technological control further distances the self from the Cosmos precisely in the degree of the advance – so that in the end the self becomes a space-bound ghost which roams the very Cosmos it understands perfectly (Percy, 1983, p. 12).
It was also his hope, humor, and encouragement that helped illuminate the crucial beginning stages of my journey. I doubt Percy understood fully that he was leaving a legacy to future generations when he wrote: “The western world…is so corrupt and boring that sooner or later young people will get sick of it and look for something better. All it takes is a couple of high livers, like Francis of Assisi, a real dude, and Clare, a rich teenage groupie, to turn it around…” (p. 347). Then again, humble souls seldom realize the extent of what they say.
Appendix B

Descriptive summaries of a selection of pertinent Catholic Church documents
Descriptive Summaries of a Selection of Pertinent Catholic Church Documents

This section briefly describes the major Church documents that have directly influenced the construction of the seven keys framework. Just as in the biographies of a selection of Catholic thinkers section, this appendix can do no justice (nor sets out to do any justice) to the greater number of articles, documents, encyclicals, letters, and communiqués that the Catholic Church has shared with the world. It should be remembered that scripture itself is at the heart of all the Magisterial documents as can be seen in the multitude of biblical references in the documents, and the sheer number of documents speaks to the pastoral care of the Church in proclaiming the Word of God to the various peoples in their particular circumstances. The documents described here fall primarily in the discipline of education or in social communications. In particular, the social communications documents are not focused solely on the methods or procedures of communication in which technology changes rapidly, but on the interplay and effects of communication on society and the human person, hence the word ‘social’ in ‘social communication’ is important. The practicality of these pastoral documents can be recognized in the truth that they all share in common in describing the quality of life that humanity is called to live. It is the practicality of how to be as human beings created in the image and likeness of God, and not so much on what to do with specific media technologies. As such, the focus of these documents is not on any particular technique of media technology, though technique and media technology are certainly acknowledged and recognized by the Magisterium. For example, the conciliar document *The Church and Internet* recognizes the marvelous technology and constructive possibilities of the
Internet together with an exploration of the specificities of the Internet’s effect on the human condition (Pontifical councils, 2002a). All of the documents can be found online at the Vatican (http://www.vatican.va) website.

The Rapid Development

Proclaimed in 2005, The Rapid Development is the 45th and last apostolic letter that Pope John Paul II wrote. Addressed primarily to those responsible for social communications, John Paul II urged a cultural revision and rethinking of attitudes toward the use of media technologies. The primary challenge confronting us in our application of media technologies is a respect for the dignity of the individual human person, and the preservation of free and open access while avoiding the manipulation of people by ideological forces enacted through the media, or the destructive use of the media to promote selfish materialism. Properly used, the media can and must promote justice and solidarity. “The Church is not only called upon to use the mass media to spread the Gospel but, today more than ever, to integrate the message of salvation into the 'new culture' that these powerful means of communication create and amplify” (para. 2).

The President of the Pontifical Council for Social Communications, Archbishop John P. Foley, in a 2005 World Catholic Association for Communication (SIGNIS) conference entitled “Media for a Culture of Peace” (Zenit, 2005a), addressed 190 media professionals from 70 different countries regarding the important need for the Church’s contribution in the formation of communicators. He recounted how the last time he had the privilege of a meal with Pope John Paul II, the Holy Father had asked if he would like a document to mark the 40th anniversary of the second Vatican council document Inter
Mirifica. Archbishop Foley responded that he naturally would, but when the Holy Father became ill, confessed that he had lost hope of receiving such a document.

However, the Holy Father must have surprised a number of people when, between hospital visits, he delivered this apostolic letter. At the conference, Archbishop Foley encouraged careful reading of The Rapid Development, that it “should be a subject of meditation for all of us” (para. 7).

The Rapid Development notes three essential tasks that helped form major concepts within the seven keys framework: (a) formation, (b) participation, and (c) dialog. In formation, education is necessary to ensure that the language and grammar of media technologies are understood and applied appropriately. In participation, recipients and creators of media technologies are called to be responsible for the proper administration and access of media technologies. In dialog, the means of communication that media technologies provide opens a greater possibility for promoting solidarity and peace. “The media provide a providential opportunity to reach people everywhere, overcoming barriers of time, of space and of language; presenting the content of faith in the most varied ways imaginable; and offering to all who search the possibility of entering into dialogue with the mystery of God, revealed fully in Christ Jesus” (para. 5).

The Documents on Catholic Social Communications

The magisterial documents of the Catholic Church on social communications, taken together, have helped construct the pillars that support the seven keys framework. This is an overview of the Catholic social communications documents arranged
chronologically, and beginning with a brief history of the Pontifical Council for Social Communications.

In 1948, Pope Pius XII approved the formation of the Pontifical Commission for Educational and Religious Films. This action established the humble beginnings of an organization that would in time leave significant marks in the history of the Church’s cultural and pastoral efforts. In the next 16 years, this pontifical commission would undergo a number of name changes, including being made a permanent office of the Holy See in 1959, and being charged to identify issues in the media in order to assemble “a single study which would yet leave room for future developments in which the different instruments of social communication, as they were called from then on, would find their proper place and receive due consideration within the Church’s renewed ministry” (Pontifical councils, 1999, para. 11). In 1964, the Pontifical Council for Social Communications, as it is now called, was commissioned by Pope Paul VI to handle all issues raised by the media technologies in relation to the mission of the Catholic Church. As a result of the work of the council, a series of World Communications Day messages has been proclaimed every year since 1967, with the intention to encourage peoples to set time aside for reflection on media technology engagement. Each World Communications Day has been dedicated to a selected theme of study relevant to the particular period in which it is promulgated. Recent World Communications Day messages that have been particularly helpful to the construction of the seven keys framework include the themes of “Religion in the Mass Media” (John Paul II, 1989), “Proclaiming Christ in the Media at the Dawn of the New Millennium” (2000), “Internet: A New Forum for Proclaiming
the Gospel” (2002), “The Media and the Family: A Risk and a Richness” (2004), and “The Communications Media: At the Service of Understanding Among Peoples” (2005a), to name a few.

When the Second Vatican Council (an international gathering of Catholic bishops with observers from other Christian churches) convened from 1962 to 1965, among the many fruits of the meeting was a 1963 document entitled *Inter Mirifica* (“among the marvelous things”), which was a Vatican Council Decree on the Means of Social Communication. *Inter Mirifica* acknowledged the importance of mass communication and identified several themes including the right to information, the need for the Church to employ media technologies as part of its ministry, and a charge for the pontifical council, with the help of experts from various countries, to study and proclaim a pastoral instruction on the means of social communications. The proclamation of the 1971 conciliar document *Communio et Progressio* was the response to this request by the second Vatican council. With a recognition of the positive roles that media technologies can play as gifts from God, together with a particular emphasis on upholding the dignity of the human person and the concern for media to always be at the service of society, the more detailed *Communio et Progressio* has set the tone for subsequent documents on social communications through the years. Its exposition of the Catholic worldview on social communications and the importance of education and training were particularly helpful in the construction of the seven keys framework. The call for Catholics to be committed to work actively in the media technologies was also a motivation for taking up the task of this dissertation.
Then in 1992, which was also the 20th anniversary of *Communio et Progressio*, the Council promulgated the document *Aetatis Novae* (“a new era”). *Aetatis Novae* was to be the supplement to *Communio et Progressio* in view of the technological changes that had taken place in the interim years. *Aetatis Novae* is unique in that it includes an appendix that has guidelines for designing pastoral plans for social communications in dioceses around the world. These guidelines encourage local relevance and the consultation of media professionals, and even break the processes down into research and design phases. In particular, the goals of such pastoral programs should include elements of media education, evangelization, public relations, social services, pastoral outreach to media professionals, and ecumenical cooperation (Pontifical councils, 1992, para. 24).

Recognizing various other powerful influences of the media technologies on societies and individuals throughout the world, the council also released the following documents: “An Appeal to All Contemplative Religious” to earnestly request their help “so that through their unique dedication and sacrifice, the communications media will express true Christian values” (Pontifical councils, 1973, para. 15); “Training of Future Priests Concerning the Instruments of Social Communication” (1986) including guidelines for media receiver training, pastoral training, and specialist training for “‘those who already work, or are preparing themselves to work, in communications’ and who ‘show special aptitude and inclination’ for this kind of work” (para. 27); “Pornography and Violence in the Communications Media: A Pastoral Response” (1989b); “Criteria for Ecumenical and Inter-religious Cooperation in Communications” (1989a); “100 Years of
Cinema” (1996) which includes example lesson plans on teaching the language and grammar of cinema to children and adults; “Ethics in Advertising” (1997); “Ethics in Communication” (2000); “The Church and Internet” (2002a); and “Ethics in Internet” (2002b).

The Documents on Catholic Education

Many Magisterial documents refer to the important element of education and training for proper Catholic formation and work in one form or another. However, there are some important documents on Catholic education that have directly influenced the construction of the seven keys framework. These comprise a set that includes: the Second Vatican Council’s document “Gravissimum educationis: Declaration on Christian education” (Vatican II, 1965c); “The Catholic school” (The Sacred Congregation for Catholic Education, 1977); “Lay Catholics in schools: Witnesses to faith” (1982); “The religious dimension of education in a Catholic school: Guidelines for reflection and renewal” (1988); and “The Catholic school on the threshold of the third millennium” (1997). These documents fall under the purview of the Congregation for Catholic Education, whose origins can be traced back to 1588 when Pope Sixtus V erected the Congregatio pro universitate studii romani to supervise the University of Rome. A section of the congregation, the Office for Catholic schools, has the wide-ranging responsibility of maintaining relationships with Catholic organizations and seminaries throughout the world on all matters concerning Catholic education. What follows is a brief description of some pertinent contemporary Magisterial documents on Catholic education.
The Declaration on Christian Education (Vatican II, 1965c) was proclaimed by Pope Paul VI on October 28, 1965. It affirmed the critical importance of education for social progress and specifically the urgent need for adults to continue their education (para. 2). Recognizing the responsibility to proclaim the mystery of salvation “and of restoring all things in Christ” (para. 4), Catholic education necessarily wrestles with the balance of a constant interplay between a contemplative personal wholeness, and a global consciousness of relationships with others. And as the dignity of the human person was a central concern of the Vatican Council, so too the universal right to education was affirmed (para. 5), along with the role of the family as the primary means to impart education to children (para. 15).

The Catholic School (The Sacred Congregation for Catholic Education, 1977) developed further the concepts and responsibilities of Catholic institutions, the beginning stages of which were set forth in the Declaration on Catholic Education. Asserting the evangelistic mission of the Church and the interrelated responsibility to “serve humanity until it reaches its fullness in Christ” (para. 6), the document cites Pope Paul VI and declares that

The Catholic school forms part of the saving mission of the Church, especially for education in the faith. Remembering that “the simultaneous development of man's psychological and moral consciousness is demanded by Christ almost as a pre-condition for the reception of the befitting divine gifts of truth and grace.” (para. 9)
The document goes on to analyze objections raised against Catholic schools and to advocate holistic development in education: “The school must begin from the principle that its educational programme is intentionally directed to the growth of the whole person” (para. 29; see also para. 35). It considers the educational work of Catholic schools through its character, its integration of faith with culture and life, its service to society, as well as emphasizes the Catholic school as “the center of the educative community” (para. 53–56). The document ends with practical directions for “those who work in, or are responsible for, these schools” (para. 69) which comprise the following topics “selected for special comment: organization and planning, ensuring the distinctive Catholic character of the school, the involvement of religious in the school apostolate, the Catholic school in mission countries, pastoral care of teachers professional associations, [and] the economic question” (para. 69).

Continuing the task of exploring in greater depth the wide-ranging content of the original *Gravissimum educationis*, the document *Lay Catholics in schools: Witnesses to faith* (1982) focuses on and develops further the concept of the lay teacher as set forth in the *Declaration on Catholic Education*. It calls for continuous professional development, firm commitment to witness to the Catholic faith, and an authentically lived out Catholic worldview. Asserting that teaching is a vocation rather than a profession (para. 37), the document describes the elements of the Catholic educational vocation that are specific to different types of schools, as well as the formation that is needed if lay Catholics are to give proper witness to the faith in an educational environment. It concludes with an
account of the support that lay Catholics educators can and should expect from the Church and the community, and encourages:

Lay Catholic educators in schools, whether teachers, directors, administrators, or auxiliary staff, must never have any doubts about the fact that they constitute an element of great hope for the Church. The Church puts its trust in them entrusting them with the task of gradually bringing about an integration of temporal reality with the Gospel, so that the Gospel can thus reach into the lives of all men and women. More particularly, it has entrusted them with the integral human formation and the faith education of young people. These young people are the ones who will determine whether the world of tomorrow is more closely or more loosely bound to Christ. (para. 81)

*The religious dimension of education in a Catholic school: Guidelines for reflection and renewal* (1988) examines the defining role that makes a school uniquely Catholic. From guidelines for the physical environment itself to the ecclesial and educational climate of the school, different elements are proposed as viewed through a Catholic worldview. Educators are urged to a personalism that takes into account the aspects of life (para. 47) and culture (para. 51) that are relevant to the education and experience of the students; to accommodate the physical and spiritual powers of each student (para. 55); and to encourage each student to play an active role in service to society (para. 63). It concludes with an analysis of the Christian formative process and the Catholic worldview of the character, goals, and telos of education:
What characterizes a Catholic school, therefore, is that it guide students in such a way "that the development of each one's own personality will be matched by the growth of that new creation which he or she became by baptism". We need to think of Christian education as a movement or a growth process, directed toward an ideal goal which goes beyond the limitations of anything human. At the same time the process must be harmonious, so that Christian formation takes place within and in the course of human formation. The two are not separate and parallel paths; they are complementary forms of education which become one in the goals of the teacher and the willing reception of the students. (para. 98)

*The Catholic school on the threshold of the third millennium* (1997) recognizes the influence of media technologies and the new challenges of the times: “First and foremost, we have a crisis of values which, in highly developed societies in particular, assumes the form, often exalted by the media, of subjectivism, moral relativism and nihilism” (para. 1). Affirming the role of teachers called to “prudent innovation” in a highly technological society and the “missionary thrust” (para. 3) to impart a solid Christ-centered foundation and the gift of salvation, the document supports the Catholic school as “a genuine instrument of the Church, a place of real and specific pastoral ministry” (para. 11). It continues the journey of defining the Catholic worldview of education and reiterates the need for Catholics to be actively present to the world: “The school cannot be considered separately from other educational institutions and administered as an entity apart, but must be related to the world of politics, economy, culture and society as a whole” (para. 16).
The seven keys framework draws its conceptual foundation from these documents on the worldview of Catholic education. Thus, taking these various goals of Catholic education together, the climate of the educating community must be holistic, and in turn cultivate an environment in which it is affirmed that “teaching has an extraordinary moral depth and is one of man’s most excellent and creative activities, for the teacher does not write on inanimate material, but on the very spirits of human beings” (para. 19).
Appendix C

Towards a definition of “media technology in Catholic education”:

Prototypical lesson instructions for handing out to students
Towards a definition of “media technology in Catholic education”: A Handout for Students

Instructions:

1. Create an APA bibliography of a minimum of 10 references per group. All references must be relevant to either media technology use in education and/or media technology use in the Catholic faith. Be specific: list page or paragraph numbers.

   a. By ‘media technology’, you would encompass all modes of media that utilize technology in one form or another. The chosen modes of media must be prevalent at this particular period in our western culture. At this juncture in time, this definition would include film, radio, TV, CDs,
DVDs, videos, the Internet, computerized cell phones, PDAs, as well as computer mediated entertainment and applications.

b. Be cognizant of whether your sources are:
   i. Applicable (Are the sources relevant to this project?)
   ii. Authoritative/authentic (Are your sources well known? Are they trustworthy? Peer reviewed journals and official magisterial documents fit better than random sources found online), and
   iii. Current (something from 10 years ago in media technology years is ancient, but there are exceptions to this if for example, it’s a seminal document).


d. You can find some resources at http://www.apastyle.org/elecref.html

e. Utilizing online search engines will lead you to many sites that you will find helpful in assisting you with APA styles.

   f. References must include one each of the following: journal, book, dissertation/thesis, and online source.

   g. Save this as a word document, editable PDF, or .rtf document.

2. Define a “Catholic worldview” as a prelude to narrowing the focus to media technology. What is meant when we speak of a “Catholic worldview”? Each group writes a definition that includes no more than five criteria, stating at least five references that support your definition criteria in APA form.

   a. There are many sources that you can draw from: scripture, magisterial documents, apostolic letters, and audiences. Many such resources can of course be located online at http://www.vatican.va
b. There are also many authentic Catholic websites that seek to help explain the faith through apologetics and discussions. For example, http://www.catholic.com

c. Feel free to include documents you’ve gathered from your other classes, but be sure to list all supporting references in APA style.

d. Save this as a word document, editable PDF, or .rtf document.

3. You now know APA styles. You’ve defined a Catholic worldview. Now, identify media technology references in scripture and magisterial documents. Your task here is to focus on Catholic documents that specifically speak of media technology. Add a minimum of 10 more applicable references to the APA bibliography created in the first task.

   a. Can you find references to media technology in scripture? If scripture is for all time and all peoples, then surely Our Lord would have accounted for this present age of media technology. What does Our Father teach us in scripture about how to use His gift of media technology?

   b. For example, Pope John Paul II’s last apostolic letter was *The Rapid Development*, which can be found at http://www.vatican.va/holy_father/john_paul_ii/apost_letters/documents/hf_jp-ii_apl_20050124_il-rapido-sviluppo_en.html

   c. You should be aware of and familiar with the documents *Communio et Progressio, Inter Mirifica, and Aetatis Novae*. (Given the above links, where do you think you’ll find these online?)

   d. Save this as a word document, editable PDF, or .rtf document.


   a. Do you think that media technology ought to be used in education?
b. Where and when should media technology be used?

c. If you had to defend the need for using and applying media technology in education, what would you say? How would you defend this need?

d. You’ll find many resources in search databases such as ATLA, ProQuest, EBSCO, and ERIC (ask your friendly neighborhood reference librarian for help). You might find some helpful references online and elsewhere. For example:

   i. [http://www.nationaledtechplan.org](http://www.nationaledtechplan.org)

   ii. [http://www.iste.org](http://www.iste.org)


e. Use the above questions, your researches from (d), and other discussions in your group to help you define what media technology integration in education means.

f. Save this as a word document, editable PDF, or .rtf document.


a. Do you think that media technology ought to be used in Catholic education if media technology and education are both gifts from God?

b. Where and when should media technology be used?

c. If you had to defend the need for using and applying media technology in Catholic education, what would you say? How would you defend this need?

d. Use the above questions, your definition of a Catholic worldview, the references from Task 3, even your findings from Task 4, and other discussions in your group to help you define what media technology integration in Catholic education means.

e. Save this as a word document, editable PDF, or .rtf document.

6. Create a single definition of media technology application in Catholic education with no more than five criteria. This last task, we will discuss as a class. The Task/Objective/Criterion chart summarizes these tasks.

a. Select one spokesperson from your group to present your group’s definition from Task 5.

b. Use the Rubric for creating a definition of media technology in Catholic education to grade your group’s work. Share your project with another group and ask the other group to grade you using this rubric as well. For
you, this is a good indication as to how I will grade your results. Make any appropriate improvements. If you’re using this PDF online, you’ll find that you can type comments directly into the text fields as well as fill in numbers that will automatically sum the total for you.

(c) Combine the output of Tasks 1 through 5 in a single word document, editable PDF, or .rtf document and turn this in with both completed rubrics.

**Task/Objective/Criterion chart**

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Objectives</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Review of APA styles.</td>
<td>Given access online as well as to the APA 5th edition guide, you will review references that conform to the APA style.</td>
<td>Create an APA bibliography of a minimum of 10 items per group relevant to media technology and the Catholic faith.</td>
</tr>
<tr>
<td>2. Define a Catholic worldview as a prelude to narrowing the focus to media technology.</td>
<td>Given scripture, the CCC, and other pertinent documents, define a catholic worldview. State references in APA form.</td>
<td>Each group writes a definition that includes no more than five criteria, stating at least five references.</td>
</tr>
<tr>
<td>Tasks</td>
<td>Objectives</td>
<td>Criteria</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3. Identify media technology references in magisterial documents.</td>
<td>Given access to magisterial documents, identify media technology references.</td>
<td>Add a minimum of 10 more applicable references to the APA bibliography created in the first task.</td>
</tr>
<tr>
<td>4. Define media technology applications/integration in education.</td>
<td>Given access online, explore various definitions of how media technology is integrated in education.</td>
<td>Each group writes a definition that includes no more than five criteria, stating at least five references.</td>
</tr>
<tr>
<td>5. Define media technology application in education as formed through the lens of a Catholic worldview.</td>
<td>Categorize, differentiate, compare and contrast the resulting definitions from tasks 2 and 4.</td>
<td>A single definition (per group) of media technology application in Catholic education with no more than five criteria, stating at least five references.</td>
</tr>
</tbody>
</table>
### Rubric for creating a definition of media technology in Catholic education

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Rating with Explanatory Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Print outs and electronic documents of all deliverables turned in and meet APA style format.</td>
<td>5= excellent; 4=good; 3=almost, but needs work; 2=barely; 1=not even close; 0=failed to meet criteria</td>
</tr>
<tr>
<td>Criteria</td>
<td>Rating with Explanatory Comments</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>2. Bibliography has a minimum of 20 references with each reference relating to both media technology and the Catholic faith.</td>
<td></td>
</tr>
<tr>
<td>3. Definition of ‘Catholic worldview’ that includes no more than five criteria, stating at least five references.</td>
<td></td>
</tr>
<tr>
<td>4. Definition of media technology applications/integration in education that includes no more than five criteria, stating at least five references.</td>
<td></td>
</tr>
<tr>
<td>Criteria</td>
<td>Rating with Explanatory Comments</td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td></td>
<td>5= excellent; 4=good; 3=almost, but needs work; 2=barely; 1=not even close; 0=failed to meet criteria</td>
</tr>
<tr>
<td>5. Definition of media technology application in education as formed through the lens of a Catholic worldview that includes no more than five criteria, stating at least five references.</td>
<td></td>
</tr>
<tr>
<td>Total (max. 25 points).</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Electronic documents are to be in the form of editable PDFs, RTF or Word documents. References must include at least each of the following: journal, book, dissertation/thesis, and an online source.