

**E-LEARNING 2.0: MODERN TRAINING FOR THE FRONTLINE CLERK**

**Institute for Court Management  
ICM Fellows Program  
2015-2016 Court Project Phase  
May 2016**

**Iryna Spangler  
Court Coordinator  
Johnson County Court at Law No. 1  
Cleburne, Texas**



## **Acknowledgments**

I want to express my deepest appreciation to my judges— Hon. Judge Jerry D. Webber, Hon. Judge Robert Mayfield, and Hon. Judge F Steven McClure—for being true advocates for my professional development, excellent teachers and mentors over the years. I also want to thank all my wonderful co-workers at the office for their loyalty, genuine support and cheering on during the course of this program. It is an honor and joy working with you.

My deepest gratitude also goes to my dear colleagues at the Texas Association for Court Administrators who set the standard for professional court administration in Texas and gave me, with kindness, great inspiration and support necessary to participate in this program.

I would like to use this opportunity to express my heartfelt thanks to Dean Daniel Straub, the President of the National Center for State Courts Mary Campbell McQueen, Vice President John Meeks, all our instructors and the staff at the National Center for State Courts for providing guidance through the various phases of this project, offering the priceless gift of their knowledge, and creating unique and unforgettable learning experience. I especially thank Amy McDowell, my project supervisor, who tirelessly combed through the numerous submissions of the project report helping bring focus and clarity to what I was trying to express. Amy, thank you so much for your guidance, patience, insightful comments and countless words of encouragement during the development of this work.

It has been a joy to get to know my classmates of the ICM Fellows Class of 2016. Your incredible personalities, knowledge and understanding of processes and people have enriched me tremendously. The Residential Phase in Williamsburg was the best educational and learning experience in my court career. Thank you for sharing it with me!

I deeply thank all County and District Clerks of Texas and the Judicial Educators around the nation for their time in responding to my surveys. Without your genuine interest and support this project would not be possible.

I could not have completed this project without the help of my family and friends. I am indebted to my parents for their encouragement, endless love and devotion, as well as the invaluable lesson of hard work and commitment; and to my husband Kevin for his unending support and the priceless sense of humor that has proven to be the most effective antidote to stress, worries or disappointment. My very special thanks go to my daughter Nadia who without any hesitation has always been my biggest fan. Your support and sweet prayers are precious to me. You are my inspiration, my reason for the things I do. I am proud of you and I love you dearly.

I truly appreciate and value everything I have learned from each and every one of you. You will forever remain the most important contributors behind my achievements, big or small. I offer each of you my heartfelt thanks and wish you all the very best. May God bless you.

## Table of Contents

Acknowledgments.....	iii
Table of Contents.....	v
List of Figures.....	xi
List of Tables.....	xii
Abstract.....	13
Introduction.....	16
Literature Review.....	22
The Context for Deputy Court Clerk Training in Texas.....	22
State-Specific Factors Affecting the Texas Judiciary.....	23
Geographic, Demographic, Social and Economic Factors.....	23
Court Structure.....	24
Court Caseload.....	25
Current Statewide Training Initiatives for Deputy Court Clerks.....	25
The Cost of Failing to Find Information.....	28
The Impact of Generational Attitudinal Differences on Workplace Training.....	30
Instructional Systems Design Models.....	32
E-Learning and E-Learning 2.0.....	34
E-Learning Defined.....	35
Foundations of Educational Theory for e-Learning.....	36
Behaviorism, Cognitivism and Constructivism.....	36
Connectivism.....	40

Adult Education and Lifelong Learning.....	41
E-Learning Technologies.....	43
Blended Learning.....	43
E-Learning Methods.....	45
Streaming Audio and Video.....	45
Web Whiteboarding .....	45
Blogs.....	45
Wikis.....	46
Virtual Worlds and Digital Games.....	46
Learning Objects.....	46
Nano-Learning.....	47
Subscription Learning.....	48
Current and Future e-Learning Trends.....	49
Self-Directed Learning - Learners Take Control.....	50
Personalized (Adaptive) Learning.....	50
Curation.....	50
Anywhere, Anytime and Any Device – Development on Demand.....	51
Cloud.....	51
Learning 2.0. Informal Learning and Social Networking.....	51
Outsourcing.....	52
Organizational Readiness for e-Learning.....	53
Technology.....	54

Innovation.....	54
People.....	55
Self-Development.....	55
Methods.....	57
Survey 1. E-Learning for Deputy Clerks.....	58
Survey 2. E-Learning Training Initiatives.....	59
Findings.....	61
Finding 1: There Is a Significant Population of Digital Natives among Texas’ Deputy Court Clerks.....	61
Finding 2: The Most Popular Training Methods Used Are Paper-Based.....	63
Finding 3: Some e-Learning Methods Are Used for Training by the Clerk’s Offices.....	64
Finding 4: There Is Interest in Expanding Use of e-Learning Methods for Training.....	64
Finding 5: There Is a Perceived Need for e-Learning Technical Support.....	65
Finding 6: There Is a Gap in Familiarity with Use of Social Media for e-Learning Purposes.....	65
Finding 7: There Is Limited Budget for Training Initiatives.....	66
Finding 8: Other States Are Exploring Use of e-Learning Approaches for Both Judicial Employees and Deputy Court Clerks.....	67
Finding 9: National Use of Web 2.0 Approaches to Training Has Mixed Results.....	67
Conclusions and Recommendations.....	69
Conclusion 1. All Deputy Court Clerks in Texas Should Be Provided with Training that Supports the Mission and Vision of the Texas Judiciary.....	70
Recommendation 1.1 The Texas judiciary Should Create a Standardized Statewide Education Program for Deputy Court Clerks.....	69

Recommendation 1.2. The Texas Judiciary Should Implement a Governance Body to Oversee the Statewide Education Program to Address Issues that Arise and to Provide a Forum for Discussion. ....	70
Recommendation 1.3. The Governance Body Should Identify Statewide Performance Standards for Deputy Court Clerks .....	70
Recommendation 1.4. An Assessment of Deputy Court Clerk Training Needs Should Ce Undertaken by the Governing Body. ....	71
Recommendation 1.5. The Governance Body Should Consider Implementation of a Tiered Certification Program for Deputy Court Clerks .....	72
Conclusion 2: E-Learning Can Play Critical Role in Facilitating Statewide Deputy Court Clerk Training that Is Flexible, Cost-Effective, and Convenient to Meet the Needs of a Changing Workforce .....	72
Recommendation 2: The Texas Judiciary Should Embrace e-Learning as a Supplement to Traditional Educational Methods for Deputy Court Clerks .....	74
Conclusion 3: Effective Training Requires More than Making Materials Available Online .....	74
Recommendation 3: To Make the Most of the Opportunities that e-Learning Can Offer, Adult Learning Principles and Motivational Techniques Should Be Incorporated into Training Materials .....	75
Conclusion 4: There Is Significant Interest in e-Learning Resources Among Elected Clerks. The Texas Judiciary Should Develop a Train The Trainer Program to Increase Conceptual Understanding of e-Learning Methods and How It Can Be Used as a Resource .....	76
Recommendation 4: The Elected Clerks Should Be Provided with Information, Support and Hands-On Experience Regarding the Use of e- Learning .....	77
Conclusion 5: An Active Online Learning Community Supports and Encourages Learners .....	78
Recommendation 5: The Texas Judiciary Should Establish an Online Learning Community for All District, County and Combination Clerk’s Offices .....	79
Concluding Remarks.....	80
References.....	82

Appendices.....	89
Appendix A: Texas Court Structure.....	90
Appendix B: Currently Offered Training Materials.....	91
Appendix C: Profile of Learner 2.0.....	96
Appendix D: Glossary of e-Learning Terms.....	97
Appendix E: Synchronous and Asynchronous e-Learning Methods.....	102
Appendix F: E-Learning Market Segments.....	103
Appendix G: Corporate E-Learning Universe.....	104
Appendix H: The Top 100 Tools for Learning 2015.....	105
Appendix I: What Features Do I Need?.....	113
Appendix J: Do I Have Resources to Purchase or Do I Need a Free Product.....	114
Appendix K: Open Source Learning Management Systems.....	115
Appendix L: Cloud Based e-Learning Authoring Tools.....	117
Appendix M: Characteristics of a Complete e-Learning Solution.....	125
Appendix N: Sample Survey 1 “e-Learning for Deputy Clerks” Distributed to Elected District, County and Combined Clerks in the State of Texas.....	126
Appendix O: Sample Survey 2 “e-Learning Training Initiatives” Distributed to State Judicial Branch Educators.....	131
Appendix P: The Number of Clerk’s Offices Currently Utilizing e-Learning Methods for Training.....	135
Appendix Q: E-Learning Methods Currently Utilized and Desired in the Future by Respondents.....	136
Appendix R: The Gap Between the Number of Respondents Currently Utilizing e-Learning Methods of Training and Those Who Desire to Have It Available .....	137
Appendix S: Allocation to Training in the County Clerk’s Offices Budget and Participation in Live Training Events of Elected Clerks and Deputy Court Clerks .....	138

Appendix T. E-Learning Training Techniques and Methods Currently Used for Training  
Judicial Officers and Deputy Court Clerks in Other States, in Descending Order.....140

## List of Figures

Figure 1. Five Phases of the ADDIE (Analysis, Design, Development, Implementation, Evaluation) Model.....	32
Figure 2. The Dick and Carey Systems Approach Model.....	33
Figure 3. Information Processing.....	37
Figure 4. Modes of Interaction in Distance Education from Anderson and Garrison.....	40
Figure 5. Sendio’s Opt-Inbox Automated Message.....	58
Figure 6. Percentage of Clerks and Deputy Court Clerks that Are Digital Natives or Digital Immigrants.....	62
Figure 7. The Number of Clerks and Deputy Court Clerks that Are Digital Natives or Digital Immigrants.....	62

## **List of Tables**

Table 1. Projections of the Texas Population .....	24
Table 2. Comparison of Pedagogy and Andragogy Assumptions.....	42
Table 3. The Factors for Assessment of e-Learning Readiness of Organizations.....	54
Table 4. The Number of Respondents Utilizing Various Training Methods.....	63
Table 5. Most Common Types of Social Media Used by Respondents.....	65

## **E-LEARNING 2.0: MODERN TRAINING FOR THE FRONTLINE CLERK**

**Iryna Spangler**

### **Abstract**

The Clerk of Court's Office is often the first point of contact with the public for information and transactions regarding the courts. The awareness and proficiency of the deputy court clerks that the public meets upon arrival in the clerk's office is paramount for timely and accurate processing of cases by the judiciary. It is also crucial for a positive first impression of the judiciary. However, the knowledge and skills required of deputy court clerks, and therefore the accompanying expectations of this job, continuously change under the pressure of both external and internal challenges. Additionally, while judges, elected clerks and other court personnel in Texas receive training opportunities to meet mandated continuing education requirements, there is no similar requirement to provide uniform statewide training for deputy court clerks. As a result, it is uncertain whether the thousands of employees who serve as "ambassadors" of the Texas judiciary possess the requisite knowledge and skills. Given the importance of the role that deputy court clerks play, identification of mechanisms to deliver information strategically linked to the mission and vision of the Texas courts to all frontline staff may be one of the most important tasks that court administration can undertake.

This project began with a review of the relevant literature on e-Learning and provides a definition, brief history and short account of the major e-Learning techniques broadly utilized today. A summary of the current and future global e-Learning trends as viewed by industry experts is also provided. The important connection between educational theory and adult learning principles is also outlined to demonstrate how these concepts support e-Learning initiatives.

Taking an active step to address the challenge described requires an assessment of the training techniques that are currently utilized by the clerk's offices, as well as organizational readiness for alternative methods of training, such as e-Learning and e-Learning 2.0. This project surveyed all of the County, District and Combination Clerks in Texas to collect this baseline information. In addition, the project collected information from judicial branch educators across the nation about the training methods used by other states to meet the educational needs of deputy court clerks and their experiences with e-Learning. A summary of the survey results is provided in the Findings section.

Based on this information, it was concluded that even those subject matter experts who do not have technical experience can take advantage of free or low cost resources now available on the Web for development of rich synchronous and asynchronous learning activities that are adaptable to the diverse needs of learners. Information regarding potential resources to assist with this task is provided in the project report. The report concludes with recommendations for future online employee training initiatives. In particular, the author recommends building a virtual learning community for deputy court clerks throughout Texas.

The goal of this project was to assist deputy court clerks and their leaders by identifying the most effective and efficient methods of training delivery based on the specific characteristics of today's learners. However, e-Learning may also open new opportunities elsewhere in the judiciary to work collaboratively to educate and train judges and other court professionals economically and strategically. It may also play a crucial role in shaping employees' perceptions of the judiciary's mission and vision, expectations, and culture by delivering content that is immediately relevant to their jobs.

Successful organizations are flexible and fast. They can quickly transfer and share knowledge, cope with large quantities of data, innovate, engage and impact communities in positive ways. Including e-Learning strategies in training for the Texas courts can empower the judiciary. While the path is not an easy one, achieving this goal makes taking the journey worthwhile.

## **Introduction**

More than 24 million cases were pending in Texas courts of all levels during the twelve-month period ending August 31, 2014, according to the annual report of the Texas Office of Court Administration (Texas Office of Court Administration [OCA], 2015).<sup>1</sup> This staggering number becomes even more impressive considering the fact that over 12 million new cases were filed during the same 12-month reporting period. Almost 2 million new civil, family, criminal and juvenile cases were filed in courts at the county level alone, resulting in 3 million cases pending during the year, respectively. Thousands of deputy court clerks in 254 counties spread over 261 thousand square miles worked on properly processing these cases for 2,459 state courts. The Clerk's offices around the state have demonstrated a remarkable ability to succeed in an environment which can be accurately described as diverse, complex, and rapidly evolving. However, the rising challenges of growing population and court caseloads, continuous legislative changes affecting legal practice, and a litigious population increasingly demand a competent and adaptable workforce. The awareness and proficiency of deputy court clerks is important for the timely and accurate progression of litigation through the system and for maintenance of a positive impression of Texas courts for the public.

Clerk's offices usually serve as the first point of contact with the public for information regarding court operations. The large number of state reports, the accuracy of which may greatly affect the judiciary and the citizens that it serves are also generated based on information entered by clerks into the case management system. Given the importance of the role that clerks play in the courts, identification of mechanisms to deliver information strategically linked to the mission

---

<sup>1</sup> The number provided is based on combined data gathered from the Activity Detail Reports by court type presented in the annual report of the Texas Office of Court Administration "Caseload Trends in the Trial Courts, Analysis of Activity for the Fiscal Year Ended August 31, 2014," pp. 54-62, 70-79, 87-91, 96-97, 103-105, 108, 110, 115-117, 122-124.

and vision of the Texas courts to all frontline staff may be one of the most important elements in administration of the courts. However, it is a challenging task for states like Texas, which has a non-unified court system with direct control over individual job requirements and training maintained at the local level. While the state judiciary recognizes the need for timely education of elected Clerks, judicial personnel, and court administrators through enactment of mandatory continuing education, there is no similar requirement for deputy court clerks. In the absence of such regulation, peer-to-peer training has been and remains the only method of instruction that most deputy court clerks receive. As a result, there is no guarantee that the thousands of clerks who serve as “ambassadors” of the courts in the eyes of the public possess the necessary skills and education.

While face-to-face instruction and handwritten notes may help clerks achieve daily tasks, such training finds its roots in a different era—an era when the clerks’ level of knowledge, skills and abilities was much lower than it is today. The knowledge received in such manner may be reduced to a value judgment, a subjective call that is dependent upon individual interpretation. It results in disparity in the level of knowledge, skills and abilities required of deputy court clerks within the same job classification, and it puts not only local Clerk’s offices, but the entire judicial organization, at risk.

Education is one of the few sustainable means to equip employees with the skills and resources to confront daily challenges. Consistent “just in time” training offered to all clerks throughout the state could play a critical role in forming their perceptions about the courts, its culture and its values--raising the bar of professionalism and promoting the honor, integrity and dignity of the judiciary. Thus, the subject of such training is not merely an academic idea. As the courts increasingly recognize knowledge as one of its most valuable resources, it needs to think

strategically about implementation of a continuously operating knowledge sharing program that allows institutional knowledge to be readily disseminated and accessed by employees. Instead of infrequent individual professional development sessions, the courts should seek new approaches that correspond with both the urgency of the situation and the real-world needs of employees to inspire a learning-driven culture.

To address these needs, electronically enhanced training techniques are now broadly utilized in the corporate environment and by educational institutions. The e-Learning arena has rapidly shifted during the past 15 years from an emerging market to an established billion-dollar global industry, driven by its ability to deliver standardized training to a geographically dispersed workforce; enhance organizational intellectual capital in the form of anytime, anywhere learning; and provide access to wide-reaching mentoring resources for maximum skill development. Leaders in the field of education have argued that e-Learning technologies can effectively increase the quality of learning experiences, remove situational barriers, and be more cost effective.

Unfortunately, negative experiences with learning management systems (LMS) and the traditional belief that it is cost-prohibitive have turned many judicial leaders away from the concept of electronic training for good reason. Many LMS offered in early days were complex software suites oriented to train massive numbers of employees with minimal human effort and contact (“push” instead of “pull” thinking). They focused on one-way, top-down communication. And for a while they were accepted by some organizations because the mere availability of information was a big deal. Their development could take months, making impossible the proactive, quick and meaningful delivery of knowledge. Employees lost interest in training, and the reduced costs for travel to training were quickly offset by the cost of software, consulting,

and infrastructure. There was also a financial investment lock-in factor due to the high cost of changing systems. Most of the content management systems (CMS) have also required significant time, money, and customization.

However, experts claim that the e-Learning concept has undergone major changes since its invention in 1999 and that it now offers new forms of flexibility in learning activities and simplified training programs; in fact, the changes were so significant that they warrant a new name - “e-Learning 2.0.”<sup>2</sup> If this information is based on scientifically proven data and the claims regarding efficiency and effectiveness of e-Learning methods are correct, then the reasonable question is, can the courts utilize e-Learning to deliver training to frontline staff? Can the significant experience and success with e-Learning in the corporate sector be useful to courts in deciding what type of training delivery fits their needs, reduces costs and avoids implementation traps? Can it be used for training of such broad audiences such as deputy court clerks across the sizable state of Texas under the constraints of limited budgets? Can it be faster and bring more meaningful results and a better outcome than currently offered training? Can the courts now take advantage of the learning opportunities available on the web without needing significant technical experience? Are the Texas courts ready for such change?

This project explores the modern e-Learning 2.0 methods of instruction that are based on the latest application of learning theories as a potential mechanism for delivery of effective and efficient on-demand training to the geographically dispersed court employees of the District, County, and Combination Clerk’s offices in the state of Texas. The project focuses on two questions:

---

<sup>2</sup> “The stage of the World Wide Web where the Internet has become a platform for users to create, upload, and share content with others, versus simply downloading content is identified as *Web 2.0*” (Schlenker, 2008, p. 1); “The idea of learning through digital connections and peer collaboration, enhanced by technologies driving Web 2.0 where learners are empowered to search, create, and collaborate, in order to fulfill intrinsic needs to learn new information, is now known as *e-Learning 2.0*” (Schlenker, 2008, p. 1).

1. What methods are currently used for training deputy court clerks in Texas?
2. Are any of the e-Learning methods and tools, including e-Learning 2.0 tools, currently used in other states for training deputy court clerks, and if so, what kind?

“Thoughtful practitioners know not only what they do, but why they are to do it.

Experience combined with reflection leads to purposeful and informed action” (Darkenwald & Merriam, 1982, p. 37, as cited in Kanuka, 2008, p. 111). The literature review begins with review of the major demographic, social, and economic factors as well as court-specific challenges and issues that dictate a new approach to training deputy court clerks in Texas. It highlights the results of the latest research according to which corporate employees spend roughly a quarter of their time searching for information and another quarter analyzing it. It also introduces the terms “digital immigrants” and “digital natives” in terms of generational attitudinal differences toward technology in the workplace. It further examines instructional design principles necessary to develop effective instructional materials. The definition, a brief history, and a short account of e-Learning features and methods are reviewed, and current and future global e-Learning trends are examined, as described by industry experts. Among them is a list of e-Learning tools and resources available to create training modules, at little or no cost and without special training in information technology or design. The foundation of educational theory and adult learning principles for online methods of instruction are explored, noting how strategies can be used to maximize the effectiveness of online learning. These techniques reflect the critical role of the collaborative community in knowledge delivery and sharing, highlighting the unique values and capabilities of online learning environments. The literature review concludes with discussion of various factors that must be considered when assessing organizational readiness for e-Learning.

All these areas immediately relate to the research questions and provide valuable contributions to a fuller understanding of the role of e-Learning as a training approach.

Following the literature review, the report outlines the research methods used. Two survey tools were applied. The first survey sought to determine the training techniques utilized by the Clerk's offices across the state, while the second survey addressed e-Learning tools and methods employed by judicial educators across the nation. Survey results are summarized under the Findings section. The report concludes with recommendations for future training initiatives in the Texas courts.

Successful organizations are flexible and fast. They can quickly transfer and share knowledge, cope with large quantities of data, innovate, engage and impact communities in positive ways. Strategizing about the use of e-Learning technologies in the Texas courts can propel the judiciary forward without being left in the digital ditch. The path is not easy, but the goal is worthwhile.

## **Literature Review**

Some judicial branch leaders are lucky to have the assistance of professional instructional designers, graphic artists and programmers to create technology-enhanced training in their courts. But most often, they alone must prepare training materials for their employees. They often do not have a background in instructional design theory or practices and have mastered only the most basic skills in learning delivery methods, mostly in paper format. This literature review presents the principles upon which technology-based training is built and summarizes currently available tools and methods as the foundation for examining whether these options are applicable to training designed for deputy court clerks in Texas.

### **The Context for Deputy Court Clerk Training in Texas**

“Change will not occur just because ‘it’s a good idea.’ It will occur when the pain of an individual or an organization is sufficiently high to justify the difficulties of assimilating change” (Tallman, 1992, p. 12). “Pain occurs when people pay the price for . . . missing a key opportunity” (Conner, 1990, as cited in Tallman, 1992, p. 12). Thus, in any project requiring change, the organization should focus on the absolute need to change when it “cannot afford to maintain the status quo,” rather than only “on the benefits of the anticipated change” (Tallman, 1992, p. 12). This portion of the literature review presents various factors influencing the organizational performance of the Texas judiciary and the current methods of training offered to deputy court clerks through status quo training efforts.

In the face of ever-increasing challenges of growing population, large geographic distances, limited resources, changes in technical and scientific knowledge affecting the future of the law practice, continuous legislative changes and administrative issues related to a non-unified state court system, the Texas judiciary has demonstrated a remarkable ability to succeed. However, increasing caseloads, a more litigious population, and complex legal issues demand a

competent, well-trained, and adaptable workforce. The Clerk's offices are usually the first point of contact with the public for information regarding operations of the courts. The knowledge they possess is important to ensure a positive impression of the judicial system for the public, and the timely and accurate progression of litigation through the system. However, the skills required of clerks are continuously and rapidly changing, affecting their role expectations and necessitating a continuous need to update their knowledge via professional education.

Additionally, a steady turnover in workforce, including an increased number of retiring workers, is also detrimental to the organization due to a loss of organizational knowledge. According to an Allied Workforce Mobility Survey (Allied HR IQ, 2012, p. 3), U.S. organizations lose almost one quarter of all new employees within a year, and many other new hires never reach the target productivity level; lack of training is among major contributing factors. Under such pressing circumstances, creation of a culture that actively supports a learning environment for deputy court clerks may be one of the most important elements in administration of the judicial organization.

#### **State-specific factors affecting the Texas judiciary.**

*Geographic, demographic, social and economic factors.* With an area of 261 thousand square miles and a growing population of over 27 million residents as of July 1, 2015, Texas is the second most populous and second largest state (U.S. Census Bureau as cited in "Texas," n.d., p. 1). "Texas' population has increased more rapidly (in percentage terms) than the population of the nation in every decade since it became a state" (Murdock et al., 2002, p. 5). For courts, the change in the size of Texas' population will be of substantial importance, leading to the need to anticipate new infrastructure, service, and other requirements. Different types of populations

will have different types of needs that will require detailed analyses and preparation to ensure effective service delivery.

**Table 1. Projections of the Texas Population**

<b>Projections of the Population</b>	<b>Number of Population</b>
Population, 1 July 2015 , estimate	27,469,114
Population change, July 1, 2014 to 2040	14,200,000 - 29,700,000
Population, 2040, estimate	35,000,000 - 50,600,000

Source: adapted from “A Summary of the Texas Challenge in the Twenty First Century: Implications of Population Change for the Future of Texas,” by Murdock, S. et al, 2002, p. 8. *The Center for Demographic and Socioeconomic Research and Education, Department of Rural Sociology Texas A&M University System*, p. 8.

As of 2014, Texas had a gross state product (GSP) of \$1.648 trillion, the second highest in the U.S. (Chantril, 2015). Its GSP is greater than the GDP of The Netherlands and South Korea, the world's 12th- and 13th-largest economies, respectively, and roughly equivalent to two Switzerlands (Riva, 2012, p. 5). However, similar to other states, in the near future, the Texas economy will be impacted by two significant factors: 1) more than 50 percent of the workforce will retire within the next three to five years, draining institutional knowledge, and 2) future generations will vary in their career expectations (Fernandes & Galdos, 2008, p.1). As a result, socioeconomic and service structures will be impacted by a population that is larger, older, and increasingly diverse.

**Court structure.** The judiciary of Texas is one of the most complex in the country, with many layers and overlapping jurisdictions (see Appendix A). According to the Annual Statistical Report of the Texas Office of Court Administration for Fiscal Year 2014, Texas has 254 counties—the most nationwide. As of September 1, 2014, there were 458 district courts operating in 88 counties, 239 statutory county courts, 18 statutory probate courts, 926 municipal courts, 817 justice courts, and one multi-county court operated in three counties (OCA, p. 9).

**Court caseload.** Texas courts handle a wide variety of case types and continuously adapt to changing circumstances. Almost 2 million new civil, family, criminal and juvenile cases were filed in the county level courts and over 12 million cases in all levels of courts in a 12-month reporting period. At the same time, 1.5 million cases were disposed of by the county level courts and over 9 million cases by the courts at all levels, resulting in 1.8 million cases pending as of August 31, 2014 in the county level courts and over 20 million cases statewide. As examples to illustrate the volume of caseload, in the same 12-month reporting period, district and statutory county courts issued 6,781 protective orders, conducted more than 66,000 probate and guardianship hearings (p.106) and heard 42,945 new applications for involuntary temporary mental health services (p.109). Over the last three decades, the number of misdemeanor assault cases in Texas grew 421%, misdemeanor drug offense cases grew 147% (but 395% compared to 1991), felony drug cases grew 267%, felony DWI cases grew 263%, felony assault or attempted murder cases grew 294% (p. 44), and child support cases with court orders grew 476% (since 1991) (p. 43). District and statutory county courts reported 73,550 cases (or 20% of the cases filed by self-represented litigants. The number of cases with self-represented litigants has increased steadily each year since 2011 (p. 69).

**Current statewide training initiatives for deputy court clerks.** The operations of the clerk's office intertwine with every segment of the judicial system. The clerk of court may be a District Clerk, a County Clerk, or a Combination County and District Clerk.<sup>3</sup> According to the Texas Constitution, the clerk is elected by the qualified voters of the county and serves a four-year term. The duties of a clerk are, generally, to serve in a ministerial capacity for the court. The elected clerk "provides support staff for the court and works with the judge to assure timely

---

<sup>3</sup> Due to the complex court system and the large number of Texas courts with highly diversified operations, the author limited the research of training initiatives for District, County and Combination Clerks serving District and County Courts at Law.

disposition of all court cases.” The clerk is registrar, recorder, and custodian of all court documents that are a part of any civil, domestic relations, probate, or criminal cause of action, and is responsible for the security of the records. Additionally, the clerk is responsible for collecting fees, fines and court costs; managing all funds held in litigation; and performing any other duties imposed by statute. The District Clerk is also responsible for a significant number of miscellaneous duties; while the County Clerk also serves the Commissioner’s Court and is responsible for filing, indexing and recording legal instruments affecting real property titles, execution records and records of condemnation suits; maps of all subdivisions and all boundary lines established by the Commissioner’s Court; vital statistic records; and in most counties, conducts elections for the county.<sup>4</sup>

According to the requirements of Tex. Gov. Code §51.605, the elected County and District Clerks are required to attend 20 hours of instruction annually regarding the performance of their statutory, constitutional and administrative duties. The clerks are also required to receive training in management of registry funds (Loc. Gov. Code, Ch. 117); fraudulent court documents and filings; and the Public Information Act and Open Records and Meeting Act.

To provide a means for the education of elected District, County and Combination Clerks, three live annual training events are scheduled by the County and District Clerk Association of Texas (CDCAT) in collaboration with the Texas Association of Counties (TAC), for their members. There are also many other training events offered by the educational providers approved by CDCAT for the purposes of the elected clerks’ continuing education hours. CDCAT and the Texas Association of Counties further support the continuing education

---

<sup>4</sup> In-depth description of all support services, procedures, financial responsibilities and other duties of the District, County and Combination Clerks would exceed the space allotted. Therefore, this report offers only a brief overview of some of these basic duties.

programs for organizations affiliated with the associations by enlisting Texas' major universities as education co-sponsors for education and training programs. In addition, the E-file System is a uniform portal that offers state-wide training in e-filing processes. Tyler Technologies, Net Data and other providers offer training in case management software. However, while the associations recognize that providing various training opportunities relevant to the clerk's duties is an important service, and the necessity of educating elected clerks is acknowledged through enactment of Tex. Gov. Code §51.605, there is no similar rule or regulation requiring education for deputy court clerks. As a result, there is no formal standardized state-wide program offered.

In assistance to clerks, the CDCAT website ([www.cdcatexas.com](http://www.cdcatexas.com)) offers an online library of forms and links to federal, state and local judicial-related websites, clerks' manuals and handbooks. Various materials are also posted on the Texas Judicial Branch website ([www.texascourts.gov](http://www.texascourts.gov)) and on the Texas Association of Counties ([www.county.org](http://www.county.org)) website (see Appendix B). The common format of materials posted on these respective websites is Word document or PDF, including PDF images of PowerPoint presentation slides. Only eFileTexas offers videos regarding e-filing procedures (<https://efile.txcourts.gov>) as a training tool.

Additionally, most of the reading reference materials are of significant length. For instance, the *County Clerk Procedure Manual*, which is a great example of collaborative work between the various judicial offices regarding training initiatives, is a 216 page PDF document. Some chapters in this document offer hyperlinks to further volumes of information. For example, the chapter "Responsibilities of the Probate Clerk" is a hyperlink to a 62 page document. Other examples include the *District Clerk Procedure Manual* (227 pages) and the *County Clerk Reference Guide* (300 pages). The text in manuals is typically single-spaced, monochrome, and does not contain flowcharts or illustrations. Most of the materials published on Texas

Association of Counties web-site are the scanned in PDF format slides of the PowerPoint presentations offered during the live conferences, which by its nature require additional explanation of the speaker. “The difficulty of defining user-friendly results from the fact that all . . . [messages] [have] two components--the content itself and the format in which the content is presented;” we tend to call material user-friendly if its format “can be used easily by a novice,” suggests Billie Wahlstrom (1985, p. 13). While the above-referenced sources contain a wealth of useful information, their format can be difficult to comprehend or remember, and does not provide direct access to the specific information quickly by those deputy court clerks who don’t have foundational knowledge on the subject and, therefore, should refer to these sources most frequently.

**The cost of failing to find information.** In his 1964 book *Managing for Results*, Peter Drucker (as cited in Feldman & Sherman, 2001, p. 2) introduced the concept that employees should be directed by the authority of knowledge. For many organizations at that time knowledge was “a scarce commodity, carefully guarded by those who possessed it and shared only under duress” (Feldman & Sherman, 2001, p. 2). As society gradually shifted to an “information economy,” the gatekeepers have had to give way to more collaborative work models. However, many employees “continued to labor under the handicap of restricted access to the knowledge” they needed to do their jobs (Feldman & Sherman, 2001, p. 2). With the invention of the web, information became readily available which convinced many users that they were expert searchers. Unfortunately, Feldman (2004) maintains that most of the information remains scattered in multiple repositories of organizations. Without appropriate training and skills, “most people do not know where to look . . . or when it is OK to stop looking. One answer looks very much like another unless the searcher understands what constitutes valid

information”; most employees and their managers are “inundated with too much information, and they have very few tools to handle the flood” (Feldman, 2004, pp. 6-8).

Feldman (2004) asserts that many ideas have to be reinvented because original work cannot be located and retrieved or because people are unaware of its existence (pp. 12-16). Studies by the International Data Corporation (IDC), the Working Council of U.S. Chief Information Officer (CIO), Association for Information and Image Management (AIIM), the Ford Motor Company and Reuters have found that employees spend from 15% to 35% of their time searching for information. Additionally, 90% of the time that workers spend to create new information resources is spent recreating information that already exists. A study by IDC (1999, as cited in Feldman & Sherman, 2001, p. 7) found that Fortune 500 companies would lose \$12 billion “as a result of intellectual rework, substandard performance, and inability to find knowledge resources.”

If employees have to spend significant time unsuccessfully searching for information, their burnout rate may be higher, leading to low job satisfaction and increased frustration (Feldman, 2004, p. 9). They will resort to interrupting their colleagues to ask for help. As a result, their decisions may be based on incomplete or erroneous information, with severe consequences for the organization. Placing the responsibility of delivering knowledge on individual managers may also put the entire organization at risk due to the incorrect interpretation or incomplete information conveyed to employees within individual offices. Feldman and Sherman (2001) assert that guaranteed, easy, fast and reliable access to information will significantly improve productivity and efficiency, reduce supervision and follow-up overheads, prevent intellectual rework, and dramatically reduce the time spent on searching contents and resources. Feldman concludes:

People need to use information within the context of their jobs and their environment. It's not just the information that is vital to the organization. It's the exchange of information, the information within the context of the people and the situation of the moment that needs to be recorded and tracked so that when people disappear, the reasons why decisions are made remain behind (Feldman, 2004, p. 37).

**The impact of generational attitudinal differences on workplace training.** In her article “Understanding Today’s Learner,” Jane Hart (2008) raises another concern. “Five generations are currently alive, and for the first time in history there are four in the workforce. Their experience influenced by the very different times in the last 80 years in which they grew up, impacted their outlook on life and working” (Hart, 2008, p. 5). According to Hart, findings show startling attitudinal differences in the younger generations. “It is no longer possible to think workers have the same approach to life, work, or learning as their bosses . . . [They are] becoming change agents, forcing organizations to rethink and improve their methods of recruiting, training, and management” (Hart, 2008, p. 11). Hart calls today’s learners “a new breed of Web 2.0 Learner” or “Learner 2.0” due to the high level of connectedness and engagement with Web 2.0 social media (Hart, 2008, p. 27). The profile of Web 2.0 Learners and their learning style identified by Hart through numerous surveys and other sources is shown in Appendix C.

Similarly, Mark Prensky (2001) coins the terms “digital native” and “digital immigrants” to describe the attitudinal differences between the generations with respect to use of technology in the classroom:

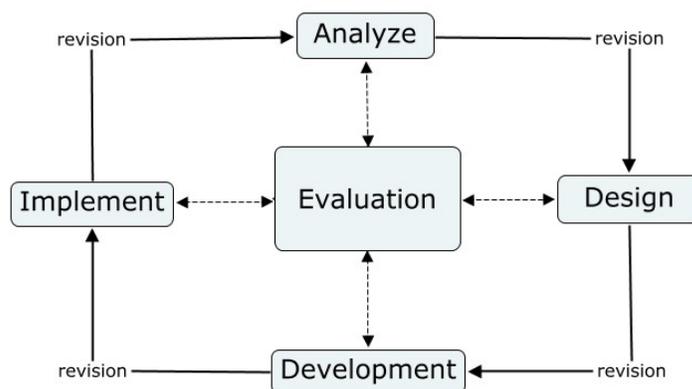
[Today’s students] . . . have spent less than 5,000 hours of their lives reading, but over 10,000 hours playing video games. . . It is now clear that . . . [they] *think and process*

*information fundamentally differently* from their predecessors. These differences go far further and deeper than most educators suspect or realize. (Prensky, 2001, p. 1)

According to Prensky, the digital natives are the “native speakers” of the digital language of computers, video games, and the Internet - those who have learned to use the technology; in contrast, the digital immigrants are the persons “like all immigrants, some better than others – to adapt to their environment, but always retain, to some degree, their ‘accent,’ that is, their foot in the past” (Prensky, 2001, p. 2). Prensky warns the digital immigrant instructors who speak a pre-digital outdated language that new learners are used to “the twitch speed” of video games, the instantaneity of hypertext, phones in their pockets, a library on their laptops, and instant messaging. They are used to receiving information at a fast pace, function best when networked, and like to parallel process and multi-task. Thus, they have little patience for lectures, slow step-by-step and one thing at a time logic, and serious “tell-test” instruction (Prensky, 2001, p. 2). Even though Prensky used the terms digital immigrants and digital natives as a metaphor, he insists that the methodology and the content of training materials must be reassessed to account for the current needs of learners: “As educators, we need to be thinking about how to teach . . . in the language of the Digital Natives . . . If Digital Immigrant educators *really* want to reach Digital Natives—i.e., all their students-- they will have to change” (Prensky, 2001, pp. 4-6).

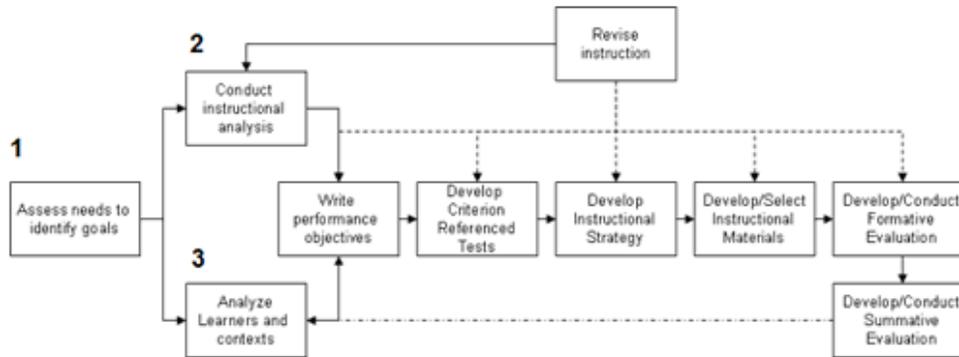
## Instructional Systems Design Models

Instructional Systems Design (ISD) describes step-by-step procedures for designing instruction, where each element is linked to the others in a progressive, systematic process (Rogers, 2002, p. 4). The models provide guidance for creation of new training. The roots of ISD are found in behaviorism and system thinking (Reigeluth, 1999, as cited in Rogers, p. 4). Two models of instructional design have stood the test of time. The ADDIE basic ISD model (see Figure 1) generally consists of five phases —Analysis, Design, Development, Implementation, and Evaluation (Forrest, 2014).



**Figure 1. Five Phases of ADDIE Model.** From “The ADDIE Model: Instructional Design,” by E. Forrest, 2014, *Educational Technology*. Retrieved from <http://educationaltechnology.net/the-addie-model-instructional-design/>

Another well-known ISD model that has been used by professional designers since 1978 is the “interact with each other and work together to bring about the desired student learning outcomes” (Walter, Carey & Carey, 2005 [1978] as cited in “Instructional Design Models and Methods,” n.d., p. 12).



**Figure 2. Dick and Carey Systems Approach Model.** From “Instructional Design Models and Methods,” n.d., *Instructional Design Central*. Retrieved from [http://www.instructionaldesigncentral.com/htm/IDC\\_instructionaldesignmodels.htm#dickcarey](http://www.instructionaldesigncentral.com/htm/IDC_instructionaldesignmodels.htm#dickcarey)

To further develop the Dick and Carey model, and update it to reflect the use of technology in instructional design, Patricia Rogers (2002) proposed an applied ISD model for technology-enhanced learning that includes the following elements:

1. Needs assessment (the need for instruction and the nature of instruction).
- 2a. Analysis of the task (scope, goals, task, sequence).
- 2b. Analysis of the learners (prior skills, experience, basic demographics of the target audience; characteristics related to the skill to be taught), the performance, and learning settings.
3. Identification of the performance objectives; development of the assessment instruments.
- 4a. Selection of instructional strategies or methods that would allow interactive environment and facilitate learning (Sales & Dempsey, 1993 as cited in Rogers, 2002, p. 7).
- 4b. Selection of instruction delivery media with consideration of available hardware, software, and access to resources.
5. Design of instructional materials.
6. Evaluation of student gains and receiving students’ feedback.
7. Evaluating of the course, its scope, the design sequence, strategies, and supporting media (Rogers, 2002, p. 6).

“Formal design models are useful for guiding a design team’s procedures when developing instructional materials. Following the model ensures a systematic and thorough process that focuses on each element or on the theory behind the model” (Richey, 1994 as cited in Rogers, 2002, p. 5). The creation of a model is often the first step toward the development of a theory. The models, such as Rogers’, which specifically account for technology-enhanced learning are particularly useful for technology-enhanced training because they illustrate most of the key variables that interact to create online educational experiences and contexts. The next step is to theorize and measure the direction and magnitude of the effect of each of these variables on relevant outcome variables, including learning, cost, completion, and satisfaction. Following this model can guide us toward a theory of online learning; help us to deepen our understanding of this complex educational context; and lead us to hypotheses, predictions, and most importantly, improvements in our professional practice. The author followed the model suggested by Rogers to structure the literature review and design data collection instruments for this project.

### **E-Learning and E-Learning 2.0**

In October 1999, during a CBT Systems, Inc. seminar in Los Angeles, a new word was used for the first time in the professional environment—“e-Learning” (“History of e-Learning Learning,” n.d., p. 1).<sup>5</sup> Since that time, the concept of e-Learning has “emerged from being a radical idea--the effectiveness of which was yet to be proven--to something that is widely regarded as mainstream” (Downes, 2005, p. 1). Moreover, now it is changing “to a degree

---

<sup>5</sup> Commonly used terms include e-Learning, Internet learning, distributed learning, networked learning, tele-learning, virtual learning, computer-assisted learning, Web-based learning, and distance learning, implying that the learner uses some form of technology (usually a computer) to access the learning materials, and to interact with the instructor and other learners. This paper will use the term “e-Learning” throughout.

significant enough to warrant a new name ‘e-Learning 2.0’” (p. 2). So, what is e-Learning, how does e-Learning- 2.0 differ, and how can these technologies be used for workforce education?

**E-Learning defined.** The term of e-Learning at the time of its invention was meant to qualify “a way to learn based on the use of new technologies allowing access to online, interactive and sometimes personalized training through the Internet or other electronic media (intranet, extranet, interactive TV, CD-Rom, etc.), so as to develop competencies while the process of learning is independent from time and place” (“History of e-Learning,” n.d., p.1). Many definitions of e-Learning that are currently cited in the literature reflect the diversity of training practices and their associated technologies. Carliner (1999, as cited in Ally, 2008, p. 4) defines e-Learning “as educational material that is presented on a computer.” Khan (2001, as cited in Ally, 2008, p. 4) defines it as “an innovative approach for delivering instruction to a remote audience, using the Web as the medium.” However, as Ally further states, “online learning involves more than just the presentation and delivery of the materials using the Web: the learner and the learning process should be the focus of online learning” (Ally, 2008, p. 4). Victor Jeurissen, a global practice leader for IBM Management Development Solutions, defines e-Learning as “the use of innovative technologies and learning models to transform the way individuals and organizations acquire new skills and access knowledge” (Moeng, 2004, as cited in Clark, 2015, p. 24). Clark admits that Jeurissen’s definition is the most promising in that he refers “to the two aspects —‘innovative technologies and learning models’ to provide the means, with the consequence being ‘acquiring new skills and access knowledge’. The ‘means’ provide the learner experience of absorbing (such as reading or seeing), doing (activity), interacting (with people), and reflecting (connecting the new learnings with previous learnings)” (Clark, 2015, pp.

25-26).<sup>6</sup> E-Learning 2.0 is defined as “the idea of learning through digital connections and peer collaboration, enhanced by technologies driving Web 2.0 where learners are empowered to search, create, and collaborate, in order to fulfill intrinsic needs to learn new information, is now known as *e-Learning 2.0*” (Schlenker, 2008, p. 1). “The stage of the World Wide Web where the Internet has become a platform for users to create, upload, and share content with others, versus simply downloading content is identified as *Web 2.0*” (p. 1).

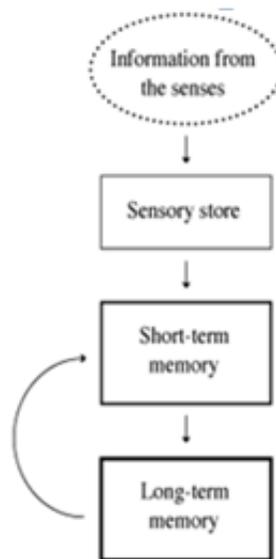
**Foundations of educational theory for e-Learning.** It has long been recognized that specialized delivery technologies can provide efficient and timely access to learning materials; however, learning is greatly influenced by both the content and instructional strategy. E-Learning must create activities that enable learners to link new information to old and acquire meaningful knowledge by using their meta-cognitive abilities (Clark, 2001; Schramm, 1977; Bonk and Reynolds, 1997, as cited in Ally, 2008, p. 3). Knowledge should be presented in the context of the workplace, allowing interactivity and a high degree of collaboration (Ring and Mathieux, 2002, as cited in Ally, 2008, p. 4). Educators must “know different approaches to learning in order to select the most appropriate instructional strategies. Learning strategies should be selected to motivate learners, facilitate deep processing, . . . cater for individual differences, promote meaningful learning, [and] encourage interaction . . .” (Ally, 2008, p. 6).

***Behaviorism, Cognitivism and Constructivism.*** While early computer learning systems were designed based on a behaviorist approach to learning, “which observes behaviors as indicators of learning” (Skinner, 1974; Good & Brophy, 1990 as cited in Ally, 2008, p. 6, 8), *cognitive* psychology is based on the information processing point of view, where the learner uses different types of memory during learning. According to cognitivists (Kalat, 2002, as cited in Ally, 2008, p. 8), sensations are received into the sensory store where the information persists

---

<sup>6</sup> For other e-Learning definitions please see Glossary of e-Learning Terms, Appendix D.

for less than one second (see Figure 3). If it is not transferred to short-term memory (STM) immediately, it is lost. The amount of attention paid and the existing cognitive structures determine the amount of information transferred from the sensory store to STM. The duration of STM is approximately 20 seconds.



**Figure 3. Information Processing Source.** From “Foundations of Educational Theory for Online Learning,” by M. Ally, 2008, *Theory and Practice of Online Learning*, 2d ed., Anderson, T. & Elloumi, F. (Eds.), p. 9, Figure 1-1. Retrieved from [http://cde.athabascau.ca/online\\_book/pdf/TPOL\\_chp01.pdf](http://cde.athabascau.ca/online_book/pdf/TPOL_chp01.pdf)

The quality and depth of processing in STM determines the amount of information transferred to long-term memory (LTM), which is either assimilated or accommodated.<sup>7</sup> According to cognitivists, because learners use their sensory systems to register information, educators must use strategies that allow the proper transfer of information from the senses to the sensory store and then to STM and LTM (Ally, 2008, pp. 10-12), including the proper location of the information on the screen, the attributes of the screen (color, graphics, size of text, etc.), the pacing of the information, and the mode of delivery (audio, visuals, animations, video). Learners

---

<sup>7</sup> “During assimilation, the information is changed to fit into existing cognitive structures. Accommodation occurs when an existing cognitive structure is changed to incorporate the new information” (Ally, 2004, p. 10).

must not be overloaded with sensations, which could be counterproductive to the learning process. Due to limited STM capacity, information should be organized or *chunked in pieces of appropriate size* (emphasis added) to facilitate deeper processing. Miller (1956, as cited in Ally, 2004, pp. 9-12), for instance, suggests that information should be chunked into five to nine meaningful units organized in the form of information maps to show their organization and to provide a “big picture” to learners to help them comprehend the details of a lesson.

The cognitive school recognizes the importance of a variety of learning strategies to accommodate individual differences. According to Kolb's learning theory (Kolb, 1984, as cited in Ally, 2008, p. 14), different people naturally prefer a certain learning style based on various factors, such as social environment, educational experiences, or the basic cognitive structure of the individual.<sup>8</sup> Educators should ensure that activities are carried out in ways that offer each learner the chance to engage in the manner that suits them best (Ally, 2008, p. 14). Individuals can also learn more effectively by identification of their lesser preferred learning styles and eliminating those methods of learning delivery from the curriculum.<sup>9</sup>

The constructivist school of learning claims that people observe, process, interpret, and personalize information “according to their personal reality” (Cooper, 1993; Wilson, 1997 as cited in Ally, 2008, p. 7). Constructivists see learners as being active rather than passive, claiming that “knowledge is not received from the outside or from someone else; rather, it is the individual learner's interpretation and processing of what is received through the senses that creates knowledge” (Ally, 2008, p. 18). Thus, learners should be allowed to “experience the information at first-hand,” personalize it and take the initiative to learn and to interact with other

---

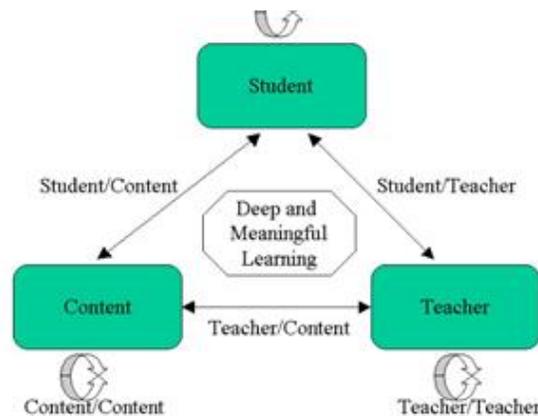
<sup>8</sup> “*Learning style* refers to how a learner perceives, interacts with, and responds to the learning environment; it is a measure of individual differences” (Ally, 2004, p. 14).

<sup>9</sup> See also Miller (1956); Holley et al. (1979); Smith & Ragan (1999); Bonk & Reynolds (1997), as cited in Ally (2004, p. 12).

learners and the instructor rather than “receiving filtered information from an instructor whose style or background may differ from theirs” (Duffy & Cunningham, 1996; Murphy & Cifuentes, 2001, as cited in Ally, 2008, pp. 18-19).

According to Ertmer and Newby (1993, as cited in Ally, 2008, p. 7), all three schools of thought can be used as a “taxonomy for learning” to develop more appropriate learning opportunities. “Neither placing information on the Web nor linking to other digital resources on the Web constitutes online instruction. Online instruction occurs when learners use the Web to go through the sequence of instruction, to complete the learning activities, and to achieve learning outcomes and objectives” (Ally, 2002; Ritchie & Hoffman, 1997, as cited in Ally, 2008, p. 22). Behaviorist strategies can be used “to teach the facts (what);” cognitivist strategies to teach “the principles and processes (how);” and constructivist strategies to teach “the real-life and personal applications and contextual learning” (Ally, 2008, p. 24). Giving the learners the opportunity to construct their own meaning from the information presented, design of online learning materials in small coherent segments, and diverse methods of knowledge delivery developed according to learning theory allows instructors to respond to different learning cultures, styles, and motivations, promote flexibility of online training, and meet the needs of individual learners. There are also many opportunities, but always a critical shortage of resources, a situation which demands that the efficiency of development and delivery efforts be maximized. Following particular recommendations and suggestions for online course development and the theory of teaching can help educators to invest time and limited resources most effectively.

**Connectivism.** The connectivist school of thought assumes that “knowledge is a network and learning is a process of exploring this network” (Dahdouh, Osorio, & Caires, 2015, p. 3). According to Heinich, Molenda, Russell and Smaldino (2002, as cited in Ally, 2008, p. 20), “learning is the development of new knowledge, skills, and attitudes as the learner interacts with information and the environment.<sup>10</sup>” The information needs a connection to reach the target, and the target and the connection needs the flow of information to stay alive. Therefore, no flow of information exists without connection, and no connection remains without flow of information” (Dahdouh, Osorio, & Caires, 2015, p. 11).



**Figure 4. Modes of Interaction in Distance Education from Anderson and Garrison (1998).** From “Getting the Mix Right Again: An Updated and Theoretical Rationale for Interaction,” by Anderson, T. 2003, *IRRODL*, Figure 1, retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/149/230>

Anderson (2008) states, “As long ago as 1916, John Dewey referred to a form of internal interaction as the defining component of the educational process that occurs when the learner transforms the inert information passed to them from another and constructs it into knowledge with personal application and value” (Dewey, 1916, as cited in Anderson, 2008, p. 44).

<sup>10</sup> Michael Moore (1989) first defined the three most common forms of interaction in distance education (student-student, student-teacher, and student-content) which were further expanded by Anderson and Garrison (1998) to include teacher-teacher, teacher-content, and content-content interaction (Anderson, 2008, p. 45).

Interaction allows various forms of learner participation, communication and control; it facilitates program adaptation based on learner input; and it acts as an aid to meaningful learning (Sims, 1999, as cited in Anderson, 2008, p. 43). The value of another person's perspective, gained through interaction, is a key component to induce mindfulness in learners (Jonassen, 1991; Langer, 1989, as cited in Anderson, 2008, p. 43). Modern theorists stress the value of peer-to-peer interaction in developing multiple perspectives—"as learners work through the content, they will find the need for learner support, which could take the form of learner-to-learner, learner-to-instructor, instructor-to-learner, and learner-to-expert interactions" (Moore, 1989; Rourke, Anderson, Garrison, & Archer, 2001; Thiessen, 2001, as cited in Ally, 2008, p. 22). Collaborative learning also increases completion rates and the acquisition of critical social and interpersonal skills (Slavin, 1995, as cited in Anderson, 2008, p. 46), leads to various forms of "reciprocal" teaching beneficial to both educators and learners (Damon, 1984, as cited in Anderson, 2008, p. 46), and is critical to the development of communities of learning for investigation and sharing of unspoken knowledge by community members (Wenger, McDermott, & Snyder, 2002, as cited in Anderson, 2008, p. 46). Finally, interaction is critical to creating a sense of social presence, a sense of community for online learners (Murphy & Cifuentes, 2001, as cited in Ally, 2008, p. 20), and to help develop personal meaning.

***Adult education and lifelong learning.*** "Lifelong learning refers to the idea that adults can and will seek learning activities throughout their lives" (McKinney, 1992, p. 2). According to Beder (1990, as cited in McKinney, 1992, p. 2), there are four main purposes of adult education: (1) to facilitate change in society; (2) to support and maintain social order; (3) to promote productivity; and (4) to boost personal growth. A theory of andragogy adopted by

Malcolm Knowles (1970, as cited in McKinney, 1992, p. 2) differentiates the learning style of children and adults (see Table 2).<sup>11</sup>

**Table 2. Comparison of Pedagogy and Andragogy Assumptions**

<b>Pedagogy</b>	<b>Andragogy</b>
The learners are dependent upon the teacher for direction regarding the content of the learning activity.	The learners see themselves as self-directed learners
Subject matter is learned for future use	Learning process focuses on solving immediate problems and improving performance
Learning occurs when society states that it is time to learn	Readiness to learn is based on the learner's need to cope with life tasks and responsibilities
Life experience is of little use in a learning situation.	Life experiences form the foundation for understanding new information

Source: adapted from "Adult and Professional Education: An Overview," by McKinney, C.A., 1992, *Adult Education Perspectives for Judicial Education*, Tallman, D.C. (ed.), p. 2.3. Retrieved from <http://ncsc.contentdm.oclc.org/cdm/singleitem/collection/judicial/id/427/rec/1>

Adult learning principles require an assessment of the learners' needs, knowledge, skills and performance for the purposes of designing the learning activities (McKinney, 1992, p 2).

On-site questionnaires, checklists, personal interviews, and nonthreatening, confidential self-evaluation tests or series of highly specific questions can provide great needs assessment data.<sup>12</sup>

The possible formats include: (a) self-observation, (b) reflection using instrumentation developed by others or based on input from colleagues, and (c) participation in an externally developed audit designed to guide employees through an objective review of their performance (Queeney, 1992, p. 3). Employees can be asked to identify their own weaknesses and educational

---

<sup>11</sup> Andragogy is a set of assumptions that addresses the way adults learn. Pedagogy refers to the teaching style most commonly used when educating children (Knowles, 1970 as cited in McKinney, 1992, p. 2).

<sup>12</sup> Needs assessment for educational purposes refers to the "identification of discrepancies between prevailing knowledge, skill, and performance levels and the desired levels" (Queeney, 1992, p. 3).

preferences and what they consider to be the weaknesses of their colleagues in the field.<sup>13</sup>

However, “‘need’ has no meaning without a defining standard or norm. Without clarification, the definition of need is reduced to a value judgment, dependent upon individual interpretation” (Queeney, 1992, p. 3). The standards can be described in terms of desired levels of knowledge, skills, or performance: (a) absence of professional practice that is actually harmful, (b) minimum competence, (c) adequate practice, and (d) optimum performance. “Identifying standards . . . should reflect conscious decisions . . . [in order] to protect the public health and welfare, the integrity of the judiciary, the individual practitioner, and the court system” (Queeney, 1992, p. 3). The specific responsibilities, work settings and career stages of employees are among factors to be considered in setting assessment standards. Each performance level must be defined in terms of the particular knowledge or the components of the specific skill, with the hallmarks that distinguish performance at or above the level of need. The extent to which the actual knowledge, skill, or performance falls below the standard is determined to be the extent of deficit, or need. “To be used successfully,” concludes Queeney (1992), “needs assessment results must be combined with . . . data on practitioners' preferences regarding methods of program delivery and scheduling, knowledge of their learning styles, and attention to providing knowledge and skills that can be transported into the court setting” (p. 3).

### **E-Learning technologies.**

***Blended learning.*** “A single delivery mode inevitably limits the critical knowledge transfer in some form or fashion” (Singh, 2003). Blended learning is a learning program “where more than one delivery mode is being used with the objective of optimizing the learning outcome

---

<sup>13</sup> For more information on the Delphi method, or series of written questionnaires with a progressive focus on respondents' views, see Merriam and Simpson (1989) and Dillman (1978) as cited in Queeney, 1992, p. 3).

and cost of program delivery” (Singh & Reed, 2001, p.1). According to dual-coding theory (Paivio, 1986, as cited in Ally, 2008), dual-coded information (or received in different modes, such as textual and visual) is processed in different parts of the brain, resulting in more encoding and better processing than when it is presented in a single mode (textual only). As a result, organizations report exceptional outcome from their blended learning (Singh & Reed, 2001). Blended learning that focuses on the learning objectives for “just-what-I-need, just-in-time” results, takes into account many different personal learning styles of broad audiences, and accepts the fact that each participant in the learning process brings different knowledge to the learning experience. This concept allows a continuous learning process with active participation by the entire organization in sharing, teaching and mentoring mission-critical knowledge. As a result, learning objectives can be obtained in 50% less class time than traditional strategies, with travel cost and time reduced by up to 85% (Singh & Reed, 2001, p. 6). Singh and Reed assert:

The experience of pioneers in blended learning shows that putting these principles into practice can result in radical improvement in the effectiveness, reach and cost-effectiveness of learning programs relative to traditional approaches. These improvements are so profound that they have the potential to change the overall competitiveness of entire organizations (Singh & Reed, 2001, p. 2).

The various dimensions of blending learning include: online (over the Internet or Intranet) and offline learning (the traditional classroom); self-paced learning and collaborative peer-to-peer discussion; structured formal learning organized in specific sequence and unstructured learning in the form of conversations and e-mail; custom content with off-the-shelf generic content; and synchronous and asynchronous learning, presented by mixing different

didactical approaches for rich content (see Appendix E).<sup>14</sup> Some of these elements are discussed further below.

### ***E-Learning methods.***

*Streaming audio and video.* Prerecorded lectures, interviews, or learners' projects have emerged as one of the premier open educational resources (McGreal & Elliott, 2008). Advanced video repository systems (e.g., Khan Academy, PBS Teachers, Moma's Modern Teachers) have seen enormous growth through social software tools. Wikis, weblogs, Facebook, Twitter, and e-portfolios all can potentially provide a vehicle to promote video lectures.

*Web whiteboarding.* "Web whiteboarding is a form of graphic conferencing, used in combination with VoIP as a single tool in general Web applications that support real-time collaboration" (McGreal & Elliott, 2008, p. 123). It allows participants to "create, manipulate, review, and update graphical information online in real time while participating in a lecture or discussion" (p. 123). Content can be saved for future presentations using a whiteboard function that emulates drawing on a blackboard. By using "Web safaris" (or video images) the instructor can lead the class to visit various sites and share applications (p. 123). "[Learners] in different locations can participate actively and collaboratively . . . in the creation and adaptation of graphical information" (p. 124).

*Blogs (web logs).* Blogs are generally personal journals or newsletters updated by the owner where visitors can add comments or ideas. Many blogs serve as mini-portals, containing links of interest to the blog owner, or to the community which they serve (these are sometimes called link logs), and support different types of media, including audio and video. One of the most popular is the vlog or video blog. Blogs are effective communication tools for knowledge

---

<sup>14</sup> "With synchronous learning, learning and teaching take place in real time (same time) while the trainer and learners are physically separated (place shift). Within asynchronous learning, learning and teaching take place with time delay (time shift) and while the trainer and learner are physically separated from each other (place shift)" (Types of E-Learning, n.d., p. 2).

sharing with other learners, the instructor, or external professionals. Blogs can be used for assigning and submission of coursework, posting course announcements, and annotated links to readings, along with advice on how to approach the studies (Deitsch, 2013). Modern blogging software can help people who are not technically sophisticated maintain their blogs without difficulty.

*Wikis.* A wiki is a web site or, more accurately, a collection of web sites, where users can insert and edit content collectively. A wiki exists on an easy-to-use database and is normally maintained by the user community. Wikipedia is the best-known wiki. Wikis can be used effectively by educators for posting course information or lecture notes in the form of simple text, PowerPoint slides, audio and video components. The learners can add their own notes and comments, along with relevant links that they may have found, creating a discussion environment for a particular topic. Learners or groups of learners can be invited to create their own wiki with project information on a topic being studied.

*Virtual worlds and digital games.* These resources allow learners to practice skills and try out new ideas in a safe environment, and thus learn from their mistakes without adverse consequences. The experts believe educational games prolong the interest of learners, keeping them on task while reinforcing the concepts taught. Learners are motivated by immediate feedback and enjoyable learning (Trybus, 2014).

*Learning objects.* Modular, chunk-sized content objects is one of the most current and popular techniques in e-Learning. The templates are built by subject matter experts (SME's) with or without help of local information technology staff, and reused across multiple projects. As discrete units in the form of text, a graphic, an audio file, animations, a video clip, or an educational game, the objects "can be integrated into a wide range of learning scenarios"

(McGreal & Elliott, 2008, pp. 129-130). The online databases provide access to a vast store of learning objects. The latest research discovered “that the students who used objects-based courses enjoyed a 41 percent drop in the time required to complete the task that was taught” (Clark & Rossett, 2002, as cited in McGreal & Elliott, 2008, p. 130).

*Nano-learning.* Miniaturization of design (or “rapid e-Learning tools”) is another trend. “As a term, ‘micro-learning’ has been around since about 2004, when it was put forward in a PhD thesis by Gerhard Gassler” (Berthelemy, 2012, p. 5). It describes a method of learning in digital media environments, “whereby concepts and ideas are presented (or retrieved) in very small chunks, over very short time-scales, often at the point of need, or at the point of maximum receptiveness” (Berthelemy, 2012, p. 6). Examples of micro-learning activities include reading a paragraph of text, e-mail or SMS; listening to a short podcast or an educational video-clip; viewing a flashcard; memorizing a definition or formula; sorting a set of items by (chrono)logical order; selecting an answer to a question; playful learning with micro-games; or learning a word of the day as a daily RSS-feed or e-mail. As Elliott Masie wrote, “A 90-second conversation with an expert triggers a huge ‘a-ha’. A few moments concentrating on learning . . . leads to a new micro-skill . . . . Most people acquire most of their knowledge in smaller pieces” (Masie, 2006, p. 1). The micro-learning process can be characterized as follows:

- a) It derives from interaction with microcontent either in designed media settings (e-Learning) or other micro-structures like weblog postings or social bookmark managers on the web (Mosel, 2005, as cited in “Microlearning,” 2016, p. 8).
- b) “Micro-learning can be an assumption about the time to solve a learning task”, answer a question, memorize an information item, or find a needed resource (Masie, 2006, as cited in “Microlearning,” 2016, p. 9).

- c) It can cover a span from a few seconds (e.g., in mobile learning) up to 15 minutes or more.
- d) It can also be understood “as a process of subsequent, ‘short’ learning activities, i.e., learning through interaction with micro-content objects in small timeframes” (“Microlearning,” 2016, p. 10).

*Subscription learning.* “Subscription learning, as its name implies, provides an intermittent stream of learning-related [short informational] interactions to those who are subscribed” (Microlearning, 2016, p. 19). The threads can be predesigned based on the learners’ needs or dynamically created based on their performance (Thalheimer, 2013). The “nuggets,” or short learning-related interactions, are usually five to ten minutes long and can involve a great variety of learning-related events, including content presentation, scenario-based questions, job aids, reflection questions, assignments, discussions, etc. Subscription-learning threads are usually designed using the scientific finding known as the spacing effect (Thalheimer, 2013). The micro-learning and subscription learning techniques can be easily incorporated in a busy learner’s daily routine, since they allow considerably lighter cognitive load and are perfectly suited for mobile and Web 2.0 technologies. They are growing in popularity and will most probably be a big hit in the future in the corporate world, because as reasonably stated by Schumacher (1973), “any *intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius — and a lot of courage (sq) to move in the opposite direction*” (p. 22).

As Anderson (2008) stated, “There is no single, right medium of online learning, nor a formulaic specification that dictates the kind of interaction most conducive to learning in all domains with all learners” (p. 54). Rather, the instructors “must learn to develop their skills so that they can respond to [learner] and curriculum needs by creating a set of online learning

activities that are adaptable to diverse [learners'] needs” (Anderson, 2008, p. 54). Emerging e-Learning technologies can be directed so as to create a rich environment of synchronous and asynchronous activities that are supportive of “how people learn,” develop social skills, collaborate to learn content, and develop personal relationships among participants within the virtual learning community (Anderson, 2008). Before, only IT experts could understand specialized tools for online instructional design; SMEs would typically find e-Learning tools challenging and frustrating due to the amount of time necessary to understand them. However, with the evolution of modern e-Learning tools that allow point-and-click course creation and editing, SMEs need not be coding experts or have significant technical experience to take advantage of the learning opportunities offered by the web. SMEs can become developers. Even the most geographically remote offices can now “look forward to a future where access to the wealth of the world’s knowledge is assured. The future has arrived” (McGreal & Elliott, 2008, p.131).

### ***Current and future e-Learning trends.***

For many years, the dominant learning technology was a LMS, a system that organizes content in a standard way and delivers it as a course in modules and lessons, supported by quizzes, tests and discussions. However, because of the rapid shift of the web “from a medium in which information is merely consumed, into a platform through which content is shared, remixed, repurposed, and passed along” (Downes, 2005), the corporate learning landscape is rapidly moving towards e-Learning and blended learning as compared to earlier instructor-led training initiatives. This also leads to an interlocking set of open-source applications in lieu of an enterprise LMS (Spiro, 2014). Globalization, the increasing need to remain competitive, rising Internet usage and its declining costs are all contributing factors to changes in corporate

training methods. As well put by field experts, four forces that will rock the waters of e-Learning in the future profoundly affect organizations' initiatives, plans and programs: they are Cloud, Social, Mobile and Information technologies (Manyika et al., 2013). Let's examine some of the major shifts that are occurring, well described by Spiro (2014) in his article "5 eLearning Trends Leading to the End of the Learning Management System" (pp. 2-8).

*Self-directed learning - learners take control.* Today learning is becoming "more 'pull' and less 'push.'" Passive has become active. Disinterested has become engaged. Those who want to stand out in the education field should embrace the learners' participation in knowledge building.

*Personalized (adaptive) learning.* An e-Learning application is no longer the "one-size-fits-all" course; it's a portfolio of tools with personalized learning material aggregated by learners, using their own RSS readers or similar applications, where learners demonstrate their work and ability to collect, organize, and reflect on information. The content is reused and remixed according to the learner's needs and interests, and can be used as a device for professional development that encourages employees to demonstrate the results of their own learning.

*Curation.* Without the input of SMEs who know what information is worthwhile in their field, the concept of self-directed learning would perish because information would lack credibility. The leaders' role is shifting from scheduling events to encouraging learners to create knowledge, collect information and generate their own content.

*Anywhere, anytime and any device – development on demand.* According to experts, in the United States, "an estimated 30 percent of all Web browsing and 40 percent of social media usage are now done on mobile devices" (Manyika et al., 2013, p. 32). The forecasts predict that

by 2025, nearly 80% of all Internet connections could be through mobile devices (p. 32), generating \$3.7 trillion to \$10.8 trillion per year from mobile Internet use (Manyika et al., 2013, p. 33). “US mobile phone and tablet commerce will top \$293 billion by 2018 (tablet=\$219B; smartphone=\$74B)—a whopping 54% of total US eCommerce sales,” states Forrester Research (2014, p. 1). With a smart phone or a tablet in hand, people no longer have to be at their desk in front of a PC. As a result, by 2025, the estimated potential economic impact of productivity gains achieved via the use of mobile Internet in internal operations could be \$ 1.0 to \$ 1.7 trillion annually (Manyika et al., 2013, p. 34).

*Cloud.* Both cloud-stored e-Learning modules and full online courses can now be downloaded on demand. Reports estimate that “the total economic impact of cloud technology could be \$1.7 trillion to \$6.2 trillion annually in 2025” (Manyika et al., 2013, p. 61).

*Learning 2.0. Informal learning and social networking.* Today, many learning professionals agree that formal training is only a part of the training solution; unstructured, unplanned learning is as important as formal learning. Blogging, wikis, and social networks “have empowered end-users, and highlighted the value of informal learning opportunities as a major part of the learning process (Schlenker, 2008, p. 4). Experts believe that movement away from single event-based live training to continuous and collaborative learning where learners share best practices and ideas is key (Meister, 1998, as cited in Hearn, 2014). They anticipate that future LMS will exhibit more social features, such as billboards, blogs, podcasts, discussion boards and social engagement monitoring, all of which make collaboration with like-minded people easier. These options also offer content that fits learners’ current needs. In general, active learning communities support learning, promote collective creativity and shared leadership, and unite learning groups with shared values, vision and practices in a global perspective (Lipman,

1991, as cited in Anderson, 2004). Members of a learning community both support and challenge each other, leading to effective and relevant knowledge construction; they have a shared sense of belonging, trust, expectation of learning, and commitment to participate and to contribute to the community (Wilson, 2001, as cited in Anderson, 2008). According to experts, information is something meant to be shared, and therefore, “Web 2.0 will become a feature, not a product” (Perez, 2008, p. 22).

*Outsourcing.* With the sudden explosion of Web-based training delivery, companies are increasingly outsourcing their training activities in an effort to take advantage of this new training approach while also reducing employee training costs. In 1999, 24% of all corporate training in revenues was outsourced, reaching \$15 billion (“Industry Report 1999- An Overview of Employer-sponsored Training in the United States” as cited in Bachman, 2000, pp. 11-13). Three general market segments currently exist that capture the general trends of the industry: Content, Technology, and Services (see Appendices F and G). According to Bachman, content should continue to be the largest segment in the training market. It was predicted to account for \$6.2 billion in revenues by 2003, up from \$735 million in 1999 (p. 23). Training services, such as systems integration, needs assessment, hosting, maintenance, and online mentoring, are forecasted to be the fastest growing component of the market, growing at 111% annually. Services were expected to reach \$4.1 billion in revenues by 2003. The smallest element of the training market consists of delivery technologies, including training management systems, authoring tools, add-on tools, collaborative software, and virtual classrooms. The technology segment was expected to have an annual growth rate of 80% (p. 23). However, the lines between the three major segments are blurring—many content publishers have begun to integrate technology, communities, hosting, and other services into their original product lines (p. 23). For

a list of free or low cost online instructional tools and open-source solutions that are currently available and can be adapted in any manner necessary to emulate the functionality of a proprietary LMS, see Appendices H through L.<sup>15</sup>

***Organizational Readiness for e-Learning.*** Like any other innovation, e-Learning strategies require up-front analysis, development time, money, technological infrastructure and leadership support to be successful.<sup>16</sup> Readiness is likely to be a crucial factor in determining levels of motivation and performance in learning from online sources.<sup>17</sup> Haney (2002, as cited in Aydin & Tasci, 2005, p. 245) classifies 70 assessment questions into seven categories to examine organizational readiness. They include: human resources; learning management system; learners; content; information technology; finance; and vendor. Likewise, Chapnick (2000, as cited in Aydin & Tasci, 2005, p. 245) lists 66 factors grouped into 8 categories: psychological; sociological; environmental; human resources; financial readiness; technological skill (aptitude); equipment; content readiness. Rogers (2003, as cited in Aydin & Tasci, 2005, p. 245) writes about four major factors: (1) technology; (2) innovation; (3) people; and (4) self-development, with each factor having different constructs: (1) resources; (2) skills; and (3) attitudes (see Table 3). The list of the proposed factors should be used to design an assessment instrument that can help organizations to answer three main questions: (1) Can we do this? (2) If we can do this, how are we going to do it? (3) What are the outcomes and how do we measure them? Organizations can then decide whether they are ready to implement e-Learning and determine the areas which

---

<sup>15</sup> This project did not focus on further evaluation of each resource, such as instructional design, interactivity, navigation, assessment, and reference tools or performance support, which would require additional research.

<sup>16</sup> For more information regarding the process of adopting e-learning for their organizations please see Anderson (2002), Bean (2003), Chapnick (2000), Clark and Meyer (2003), Gold et al. (2001), & Rogers (2003), as cited in Aydin & Tasci (2005).

<sup>17</sup> Many different assessment instruments are readily available and often cited in the literature, such as Anderson (2002), Rosenberg (2000); Broadbent (2001); Milton (2002), as cited in Aydin & Tasci (2005).

need improvement in order to achieve successful e-learning outcomes (see Appendix M regarding the characteristics of a complete e-Learning solution).

**Table 3. The Factors for Assessment of e-Learning Readiness of Organizations**

<b>Factors</b>	<b>Resources</b>	<b>Skills</b>	<b>Attitudes</b>
Technology	Access to Computers and Internet	Ability to Use Computers and Internet	Positive Attitude Toward Use of Technology
Innovation	Barriers	Ability to Adopt Innovation	Openness to Innovations
People	Educated Employees Experienced Educators An e-Learning Champion Vendors and External Parties	Ability to Learn via/with Technology	
Self-Development	Budget	Ability to Manage Time	Belief in Self-Development

Source: Adapted from “Measuring Readiness for e-Learning: Reflections from an Emerging Country,” by Aydin & Tasci, 2005, *Educational Technology & Society*, 8 (4), 244-257. Retrieved from [http://www.ifets.info/journals/8\\_4/22.pdf](http://www.ifets.info/journals/8_4/22.pdf)

*Technology.* E-Learning does not require significant infrastructure (Broadbent, 2001, as cited in Aydin & Tasci, p. 248). The most basic requirement is a reliable Internet connection; in Texas, all courts have Internet access sufficient for e-learning use.

*Innovation.* Innovation involves “examination of past experiences” and barriers to implementation. Employees should have basic computer and Internet skills to obtain the benefits of e-learning; easy to understand innovations are adopted more rapidly than those that require development of new skills and understandings (Rogers, 2003, as cited in Aydin & Tasci, p. 248). Internal or external, legal and/or political barriers might also influence the applicability of e-Learning (Aydin & Tasci, 2005, p. 248).

*People.* The “people” factor embraces the characteristics of human resources. Literature reveals that the skills currently possessed by the workforce are important to consider. In addition, the existence of a “champion,” or someone “who has the knowledge, skills, responsibility and

authority to lead the organization toward adaption of an innovation,” is important for an innovation to be successful.<sup>18</sup> Research conducted by Rosen and Weils (1998, as cited in Aydin & Tasci, 2005) shows that some employees in any organization may be uncomfortable with new technology. Consequently, identification of employees’ and managers’ attitudes toward use of technology must be taken into account. “If employers don’t take into consideration that there will be company resisters and technophobes for whom they have done nothing to help, then they are going to suffer . . . and there will be more mistakes and errors” (Rosen and Weils, 1998, as cited in Aydin & Tasci, 2005, p. 248).

*Self-development.* Regarding the self-development factor, according to Rogers (2003), an early adopter’s existence, past experiences and education level may be influential on the adoption of an innovation. Brown (2001, as cited in Aydin & Tasci, 2005, p. 249) notes that learners who are new to e-Learning tend to spend more time becoming familiar with the technology. Hart (2008) states that:

. . . although all Internet users will come across social media tools at some time, there are very different patterns of use in terms of (a) the level of engagement with social media, that is, how they interact with the tools, (b) the frequency of engagement, or how regularly they make use of social media, and (c) the scale of engagement, which is the range of tools they use (p. 19).

Based on this assumption, Hart (2008) developed a Model of Engagement with Social Media, which identifies three main levels in terms of engagement:

1. “Readers” (or “passive Consumers”) — users who simply browse Websites, blogs, and wikis, watch videos, listen to podcasts, etc.

---

<sup>18</sup> See Gilley, Egglund & Maycunich (2002); Jacobs & Washington (2003); Swanson (2001); Carnell & Shank (2003); Koska (1992) as cited in Audin & Tasci (2005).

2. “Participants” (or “active Contributors”) — users who contribute to content in blogs, wikis, and other Websites; share links using online bookmarking services or from their RSS readers; or otherwise connect with others using instant messaging, SMS, and micro-blogging and social networking services.

3. “Creators” (or “pro-active Producers”) — users who create and share their own content like photos, videos, and other files and documents, as well as build their own blogs, wikis, social networks, etc. to encourage connections and discussion with others. (Hart, 2008, p. 20).

It is recommended that the Texas judiciary should assess its readiness for e-Learning not only by analyzing the resources it possesses, but also the skills and attitudes of its employees and managers. The judiciary should make special efforts to find people who are experienced in e-Learning and technology, and support them in their work to diffuse the innovation.

Consideration of the above-stated factors can provide valuable information to assess readiness for e-Learning in the judiciary before beginning an e-Learning project. If the assessment reveals that readiness is not at a sufficient level to sustain a project, the judiciary may choose to undertake strategies to create a supportive learning culture prior to undertaking an e-Learning initiative.

## Methods

Data was collected for this project using two surveys. Queeney (1992) observes that:

It is important to involve all stakeholders in determining the learning activity objective. If assessment of a total population is impractical, results of assessment of an accurately drawn random sample can be accepted as representative of the entire population . . . . Participation of individuals selected for their roles as leaders within the profession also can provide reliable insights into educational needs. Such group involvement increases commitment to the program by all involved (p. 3).

Based on this principle, surveys were designed to involve two groups of stakeholders within the profession. The first survey sought input from the elected District, County and Combination Clerks, i.e. the leaders of the Texas clerk's offices. The second survey was distributed to judicial branch educators (JBEs) around the nation as the subject matter experts who can share their experiences with e-Learning methods for training judges and court professionals in the state courts.

Online survey tools "speed up data collection and analysis processes" and "extend the reach of survey research to a diverse set of respondents while maintaining their anonymity" (Sheehan & Hoy, 1999, as cited in Bonk, 2002, p. 29). Web-based surveys are also often easier to complete than comparable paper-based questionnaires (Kaye & Johnson, 1999; Medlin, Roy, & Chai, 1999, as cited in Bonk, 2002, p. 29). For these reasons, the online method of survey distribution was selected for this project.

Each survey was accompanied by a letter containing a brief explanation of the survey and its intended use along with a link to the survey on "SurveyMonkey." "Participants are more likely to respond if ensured confidentiality" (Barksdale & Lund, 2001, as cited in Williams, n.d.,

p. 5). Therefore, the respondents were also informed that surveys were designed for anonymous feedback. To maintain anonymity, specific identifiers were not collected during the research.

The surveys were pre-tested by local employees, National Center for State Courts staff, and other Fellows class members and subsequently refined based upon their feedback. The suggestions mostly pertained to clarification of terms used within the survey instruments.

### **Survey 1. E-Learning for Deputy Clerks.**

This survey was designed using the “Create Survey” feature of SurveyMonkey (see Appendix N). The contact information for respondents was obtained from a highly reliable source—the clerk directory posted on the CDCAT website. The survey was sent directly from SurveyMonkey via URL and e-mail to 432 Texas County, District and Combined Clerks on November 10, 2015, with a requested return date of November 24, 2015. Sending the survey to such a large group of respondents by entering their individual contact information into the system required investment of significant time and effort, however, no alternative was available. The survey was sent to all clerks listed in the directory. Six surveys bounced or opted out, resulting in a total number of 426 surveys distributed. After the first distribution, 64 responses were received, yielding a response rate of 15%.

It was noted that one of the factors influencing the response rate could have been firewall or antivirus program settings blocking the e-mail from SurveyMonkey. A number of counties also utilize Sendio’s Opt-Inbox

technology which requires new senders to send an additional e-mail for verification of the



**Figure 5. Sendio’s Opt-Inbox Automated Message**

sender's e-mail address in order for e-mails to be accepted by the security system (see Figure 5). SurveyMonkey does not have technical capacity allowing the survey author to receive such warning messages from Sendio and respond accordingly. Thus, security settings on the respondents' computers must be taken into consideration as a possible contributing factor to the low response rate. To overcome this obstacle, on November 20, 2015, a follow-up reminder to complete the survey was sent to the same group of respondents directly from the author's e-mail box. The follow-up notice resulted in completion of an additional 89 responses. Overall, 153 responses were received yielding a 36% response rate.

## **Survey 2. E-Learning Training Initiatives**

Assessing the experience of other states that have implemented e-Learning methods for training deputy court clerks can provide useful lessons learned to inform an initiative in Texas. Therefore, a second survey was created for distribution to judicial branch educators seeking information about e-Learning programs implemented in their respective states for training judges and court professionals. Similar to the survey for Texas clerks, an anonymous online survey was designed to accommodate geographically dispersed participants and ensure confidentiality (see Appendix O).

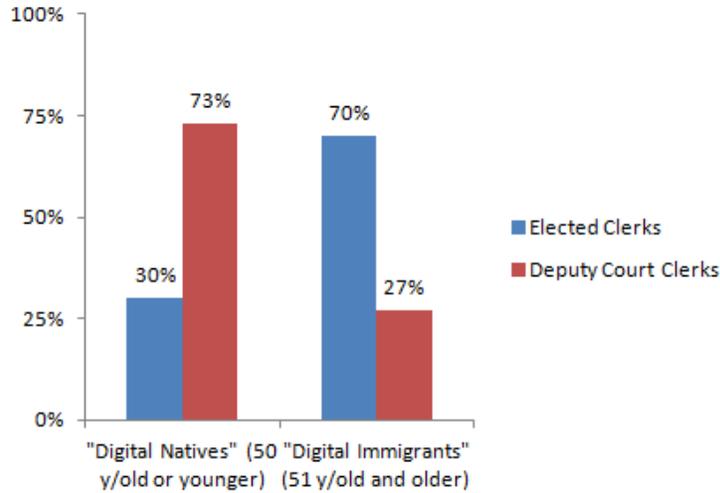
A significant challenge to distributing this survey was encountered. It was difficult to identify a point of contact in each state familiar with current training methods. The literature noted the value of professional networks, particularly with regard to connecting colleagues "with leading experts committed to improving organizational practices [that] can provide access to many others within the same discipline." Applying this technique, the author contacted the President of the National Association of State Judicial Educators (NASJE), regarding potential distribution to NASJE's membership. The survey was distributed to 188 members through the

NASJE listserv on November 24, 2015, with a response date of December 7. A follow-up reminder was sent via e-mail on December 8, 2015, with an extended response date of December 11, 2015, which resulted in responses from 11 states (a 5% response rate).

## Findings

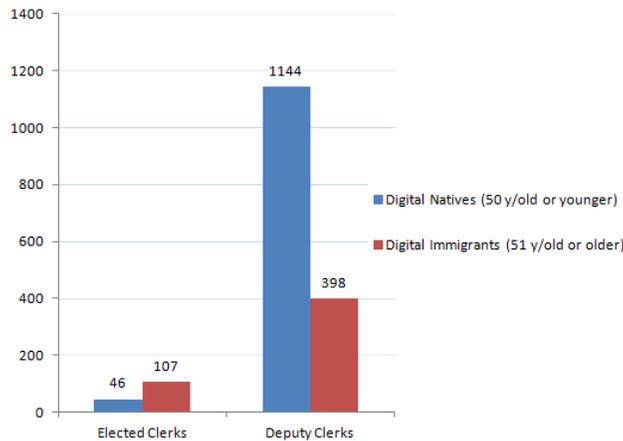
### **Finding 1: There is a significant population of digital natives among deputy court clerks in Texas.**

Almost 40% of deputy court clerks in Texas are “digital natives” or millennials. Eight of the deputy court clerks were born after 1996, representing the entry of Generation Z or “always connected Digitalians” into the workplace. Approximately 35% of the deputy clerks belong to Generation X, individuals who grew up in the digital age. Baby Boomers and Veterans account for 25% of the deputy court clerks, born and raised before the Internet era. In contrast, 70% of the Clerks of Court are Baby Boomers or Veterans. Another 25% are members of Generation X - the generation that has been exposed to technology and the web revolution of the 1990s. Only 6% of clerks are members of the Net Generation or Millennials - the first generation to grow up with the Internet. These generational differences are even more interesting when the respective generations are collapsed into two major groups - digital natives who were born and raised in the digital age (Generations X, Y and Z, or those who are 50 years old or younger), and digital immigrants who “were born in the pre-digital era and [have] adapted to the digital environment only to a certain degree” (those who are 51 years old or older). When combined, the percentage of digital immigrants and digital natives for clerks and deputy court clerks is mirrored almost exactly. Among the clerks, 70% are digital immigrants, while among the deputy court clerks, 73% are digital natives (see Figure 6).



**Figure 6. Percentage of Clerks and Deputy Court Clerks that Are Digital Natives or Digital Immigrants**

Also important to note is the proportion of digital natives to digital immigrants in the workforce. There are 25 times more digital natives among the deputy clerks than among the clerks. This contrast is depicted in Figure 7 below. This illustrates that a significant portion of the deputy court clerk workforce in Texas are digital natives, and that the majority of these individuals are supervised by digital immigrants.



**Figure 7. The Number of Clerks and Deputy Court Clerks that Are Digital Natives or Digital Immigrants**

**Finding 2: The most popular training methods used are paper-based.**

The most common forms of training delivery reported by respondents are paper-based procedures manuals, including those posted on the CDCAT website (used by 66%) and performance aids (used by 65%). Forty-three percent of respondents indicated that web-based training was used. Manuals with demonstration accounted for 14% of responses; online reading, audio and video training accounted for 9%, and online flowcharts accounted for 5%, making these the least popular among the training methods. Despite the availability of these various methods of training, most of the respondents indicated that hand-written notes taken on a day-to-day basis and hands-on training with assistance of trained deputy clerks are the prevalent forms of training. Respondents also commented that no judicial web-based training is available online.

The number of respondents who actually utilize training methods other than hands-on activities is also important to note. Even though procedures manuals and performance aids appear to be the most popular methods of training delivery, only approximately one-half of the respondents use them (53%). One-third of respondents use computer and web-based modules (34%). Few use audio and video modules (7%) or flowcharts (4%). None of the training methods are utilized by all of the Clerks’ Offices throughout the state.

**Table 4. The Number of Respondents Utilizing Various Training Methods**

	<b>Percent In Total Number of Respondents, %</b>
Procedures Manual	53
Performance Aid	52
Computer- and Web- based Modules	34
Procedures Manual with Demonstration	11
Audio/Video	7
Charts	4

**Finding 3: Some e-Learning methods are used for training by the Clerk's Offices.**

Nearly one-fourth of respondents currently utilize some e-Learning methods for training deputy court clerks (see Appendix P). The most popular methods include web pages and online reading (25%), web-based training modules (25%), and online demonstration (19%). Three respondents use podcasts and one respondent uses an online classroom and coaching.

**Finding 4: There is interest in expanding use of e-Learning methods for training.**

Respondents indicated an interest in using e-Learning for additional training purposes. More than one-third of clerks noted high interest in online lists for performing a task (33%), quick reference guides (33%), or web-based training modules (31%). Interest in other methods included online demonstrations (25%), online audio and video (24%), self-paced courses (24%), online reading (21%), Questions & Answers online pages (21%), and online discussion groups and forums (20%).

There is a significant gap between the clerks' offices that currently use e-Learning methods and those that want to use them (see Appendix R). There are seven times more respondents who would like to offer Questions & Answers online pages to deputy court clerks than those who currently have access to them; six times more respondents would like online lists of tasks and self-paced courses; five times more respondents would like online tests, broadcasts of live seminars, and podcasts; four times more respondents would like online assignments and quick reference guides; and three times more respondents would like online audio and video, online classrooms and coaching. The most desirable methods of e-Learning delivery are online classrooms and coaching (97%); online self-paced courses (89%); lists for performing a task (89%); Q & A pages (89%); broadcasts of live seminars (85%); online tests (85%); podcasts

(83%); online assignments (82%); and quick reference guides (80%). Each e-Learning category listed in the survey received support of greater than 50% from the respondents.

**Finding 5: There is a perceived need for e-Learning technical support.**

Almost half of the respondents (48%) agree or strongly agree that e-Learning projects can be implemented only with the help of vendors or specialists, such as content experts, project managers, graphic artists, instructional designers, and others with special programming skills. In contrast, 25% of respondents disagree or strongly disagree that outside vendors or specialists are needed.

**Finding 6: There is a gap in familiarity with use of social media for e-Learning purposes.**

Notably, survey respondents demonstrated a high degree of interest in social media e-Learning tools for purposes of training deputy court clerks, such as online message boards and mailing lists (77%), discussion groups and forums (75%), and chat and instant messaging (72%) (see Appendix Q). The most popular social media activities are shown in Table 5 below.

**Table 5. Most Common Types of Social Media Used by Respondents**

No.	Activity	Number of Total Responses	Frequency	Type of Activity
1	I use Facebook	90	54 (daily)	Contributor
2	I visit sites that host Power Point Presentations	63	42 (few times a year)	Participant
3	I visit photo Web-sites	61	27 (few times a year)	Participant
4	I read blogs	58	24 (few times a year)	Participant
5	I share my own photos	45	17 (few times a year)	Creator/Producer
6	I listen to podcasts	42	22 (few times a year)	Participant
7	I use LinkedIn	34	14 (few times a year)	Contributor
8	I use Twitter	25	8 (few times a year)	Contributor
9	I subscribe to RSS feeds	21	7 (few times a year)	Participant
10	I comment on blogs	19	11 (few times a year)	Contributor
11	I share my own presentations via Web	10	4 (few times a year)	Creator/Producer

Survey results indicate that respondents have a varied degree of frequency, level, and extent of engagement with social media tools. Around 40% of respondents are participants,<sup>19</sup> while only 20% (with the exception of Facebook users) are contributors, and less than 10% are creators/producers of online content. This is in contrast with the degree of familiarity that respondents reported deputy court clerks demonstrate. More than 75% of respondents indicated that the deputy court clerks in their offices are familiar with digital applications and media tools. Every respondent indicated having at least one deputy court clerk that has familiarity with social media applications. Almost 65% of respondents indicated that they had an “e-Learning Champion” in their office, an employee who can effortlessly handle computers and Internet applications and that could help the respondent to implement, and other employees to become acquainted with, a simple e-Learning project.

**Finding 7: There is limited budget for training initiatives.**

While there may be interest in e-Learning, it is important to assess whether clerks’ offices have sufficient resources to effectively develop and deliver e-Learning on the local level. Most respondents indicated that they have a budget only sufficient for mandatory training of elected clerks. Some clerk’s offices have extra funds, but the amount of funds, with the rather unique exception of one or two offices, is insufficient to provide all deputy court clerks in the office with training opportunities. The amount of funds allocated for training varied from \$98.76 per person per year, to \$1,500 and above in some offices.<sup>20</sup> Forty percent of respondents reported that they had not sent any deputy court clerks to training events in the past two years. Only 17% of deputy court clerks had an opportunity to attend training (see Appendix S).

---

<sup>19</sup> Readers and consumers of information posted on the web by others

<sup>20</sup> Eight offices out of 77 reported this amount.

**Finding 8: Other states are exploring use of e-Learning approaches for both judicial employees and deputy court clerks.**

Judicial educators from 11 states responded to the survey. Their responses indicate that the extent to which states are implementing e-Learning approaches to meet the needs of judicial employees vary (see Appendix T). The most popular e-Learning techniques remain web-based training modules - 81% currently use them for training judicial officers and 54% use them for training deputy court clerks. Other options include web pages and online reading (72% for judicial officer training and 45% for deputy court clerks); online quick reference guides (63% for judicial officer training and 45% for deputy court clerks); broadcast of live seminars (45% for judicial officer training and 18% for deputy court clerks); audio/video presentations (36% each for judicial officer and deputy court clerk training); online surveys (36% for judicial officer training and 18% for deputy court clerks); Q & A (18% each for judicial officer and deputy court clerk training); online message board/ mailing lists (27% for judicial officer training and 9% for deputy court clerks); and online assignments and tests (9% for deputy court clerk training). It appears that no one is using virtual classrooms and online coaching, user-generated content, or job-related games. There is a wider variety of e-Learning methods used to train judicial officers than deputy court clerks. The few exceptions include online demonstration (45%), online performance aids (36%), online simulation (18%) and online learning communities (37%).

**Finding 9: National use of Web 2.0 approaches to training has mixed results.**

One respondent has used Web 2.0 approaches with a select group of judges, but plans to implement their use more widely in early 2016. Another respondent noted that Web 2.0 approaches have been used in the past. The training is now limited exclusively to training videos, printed material and in-classroom use. Three states noted they are using LMS for training deputy

court clerks. The LMS in one state allows addition of Web 2.0 features, such as social media tools; one state is using the system for training judicial officers. Respondents from two more states are considering supplementing current training with Web 2.0 approaches and social media tools for judicial officer training within the next two to three years. One state is also considering this approach for deputy court clerks.

Respondents identified creative use of e-Learning tools for both deputy court clerk and judicial officer training. For example, according to the respondents, 45% are currently using “bite-size” training modules for training deputy court clerks; one state is also planning on utilizing this method in the next one to two years to train judicial officers. Another state uses rapid learning tools with judicial officers, clerks and attorneys; all of its materials are developed in-house. In another state, deputy court clerks are offered broadcast videos; short 15 minute tutorials; job aids; and longer, more in-depth online courses. Yet another state is in the process of implementing a court clerk certification program consisting of four core modules and some electives. MOODLE and Adobe Captivate were recommended by the respondents as their tool of choice among free or low-cost e-Learning options.

## **Conclusions and Recommendations**

**Conclusion 1: All deputy court clerks in Texas should be provided with training that supports the mission and vision of the Texas judiciary.**

The findings support that there is a clear need for continuing education for deputy court clerks. Continuing education provides the opportunity to maintain and enhance existing knowledge, skills and abilities to perform daily tasks as well as to effectively address challenges. The elected clerks indicated that current training is limited to peer-to-peer training and taking notes. This approach creates a high probability that information will be incorrectly interpreted or incompletely conveyed to clerks across the state, placing both the local court and the judiciary as a whole at risk of inconsistent practices. The funds set aside for attendance at live training events in most of the clerks' offices can only support mandatory continuing education for elected clerks. Only one out of six deputy court clerks were able to attend a seminar within the past 12-months.

In the face of ever increasing challenges, the Texas judiciary cannot afford to maintain the status quo with regard to deputy court clerk training. To meet both internal and external demands, the Texas judiciary should undertake efforts to offer uniform and consistent continuing education for deputy court clerks; ensure that all clerks across the state have an equal opportunity for professional growth and development regardless of the respective offices' size, location, and availability training funds; and develop a culture of support for continuing education and improvement of training methods.

**Recommendation 1.1: The Texas judiciary should create a standardized statewide education program for deputy court clerks.**

Creation of a standardized, statewide education program for deputy court clerks in Texas should be addressed at the state level. A centralized approach will avoid duplication of efforts,

ensure security, and minimize the divergence of approaches. In addition, a statewide approach can also address issues raised by local budgetary constraints. Since both CDCAT and TAC currently offer a variety of training opportunities to elected clerks, these organizations are well-placed to lead and support additional training opportunities for deputy court clerks. For success, it is critical that the initiative receive both participation and support from all stakeholders, as well as the end users – the deputy court clerks. A statewide education program based on a comprehensive curriculum that is directly linked to the requirements of the deputy court clerk position can also play a crucial role in shaping employees’ perception of the judiciary, align the culture of each office with statewide standards, and ultimately increase the overall competency of the Texas judiciary.

**Recommendation 1.2: The Texas judiciary should implement a governance body to oversee the statewide education program to address issues that arise and to provide a forum for discussion.**

A training governance body should be created to take charge of this initiative. Tasks that should be incorporated include establishing a process to regularly share training developments through newsletters, journals and other appropriate media; organizing related meetings and events; and revisiting the vision for the training on a regular basis. Inclusion of experienced deputy court clerks and open communication with local offices would provide an important balance to discussions and provide necessary stakeholder input.

**Recommendation 1.3: The governance body should identify statewide performance standards for deputy court clerks.**

Without a defined standard or norm, the term “need” has no meaning and is reduced to a value judgment, dependent upon individual interpretation. Thus, one of the most important

functions of a governance body will be development of performance standards for deputy court clerks in District, County and Combination Clerk's offices to clearly outline the knowledge, skills and abilities necessary for the job. In addition, the governance body should consider alignment of these knowledge, skills and abilities with organizational needs and objectives. The standards should be described in terms of desired objectives and particular knowledge, skills, or abilities required for each individual task. The governance body should include performance standards that account for increased responsibilities and different career stages to acknowledge progress in increased responsibility and experience.

**Recommendation 1.4: An assessment of deputy court clerk training needs should be undertaken by the governing body.**

Educational design theory requires that an assessment of the learning gap be conducted before methods instruction and delivery are considered. Thus, one of the first tasks that the governance body should undertake is development of a needs assessment strategy and evaluation instruments to guide the local offices through an objective review of their performance and practice-related educational needs. Deputy court clerks can be asked to identify their own weaknesses and educational preferences based on self-observation. Data can be collected by utilizing confidential self-evaluation tests or a series of questions, checklists, or personal interviews. Inaccurate needs assessment may have a detrimental effect on training effectiveness and reduce the motivation of employees for further learning. Thus, combining several different assessment methods is preferred to provide more reliable and complete data. Additionally, using pre-test and post-test evaluation techniques with a small group of volunteers can significantly aid in improvement of the assessment instruments.

**Recommendation 1.5: The governance body should consider implementation of a tiered certification program for deputy court clerks.**

Mere support of education for deputy court clerks may not be enough. Education may need to be required on a continuing basis to ensure that all clerks across the state receive the latest information to meet the judiciary's mission, vision and objectives. As a long term goal, the governance body should consider the option of a tiered certification to assist deputy court clerks with achieving their career goals and to encourage them to participate in ongoing education. The governance body should consider opportunities to recognize deputy court clerks on a state level as they complete tiers of the certification program.

**Conclusion 2: E-Learning can play a critical role in facilitating statewide deputy court clerk training that is flexible, cost-effective, and convenient to meet the needs of a changing workforce.**

E-Learning promises to increase employee retention by: 1) ensuring that employees have the right knowledge to work effectively; 2) rapidly developing, deploying and updating courses to ensure the most recent content is available; 3) providing effective training that is available anytime and anywhere, with a continuity of message not ordinarily found in other types of training; 4) broadening training opportunities; 5) enhancing morale and motivation of employees; 6) sharing support and services so that organizations can avoid redundant technology investments and streamline administrative processes; and 7) implementing strategic initiatives (Bonk, 2002). Studies suggest that comprehension levels and retention rates derived from e-Learning may be up to 250% better than traditional methods (Merrill Lynch, 2000, as cited in Minton, 2000, p.5). Based on these findings, the reasonable conclusion can be made that e-Learning can also be used effectively by the judiciary to meet the needs of its professionals and

encourage a cultural shift away from locally-based management practices to cooperative teamwork across the state.

In the early days of e-Learning, many state judiciaries invested in a sophisticated LMS, development of which could take months. Typically, the benefit of an LMS is not realized for up to a year or longer from the time the initial investment is made. And yet, there were several disadvantages to use of an LMS: proactive, quick and meaningful delivery of knowledge was impossible; employees lost interest in training; and the reduced costs for travel were quickly offset by the cost of software, consulting, staffing and infrastructure. There was also a financial investment lock-in factor due to the high costs of changing systems. Despite the absolute mission-critical nature of information technology, local IT departments are often provided with slim budgets for maintenance of past investments and current infrastructure, preventing access to new technology. Today, however, the modern technological environment provides imaginative ways to cut the cost of e-Learning by offering a plethora of low-cost or free, open-source solutions and resources as a viable alternative.

According to the literature, many in today's workforce proficiently use the social and collaborative approaches of Web 2.0 in all aspects of their life. They are also highly visual and experiential learners who want knowledge "just in time" that is easily accessible and relevant to their tasks and responsibilities. In the opinion of the clerks, most of the deputy court clerks are familiar with electronic applications and social media tools. Most of the elected clerks are also consumers and contributors in terms of engagement with social media. E-Learning meets the needs of such "digital natives" by focusing on content that is "reusable, interoperable, and easily manageable at different levels" (Urdan and Weggen, 2000, p.12). On the other hand, simple tools are available for those instructors and learners that are traditional or inexperienced in e-Learning

methods. The availability of point-and-click course creation, editing and review now allow the clerks to take advantage of learning opportunities available through the Web without having significant technical experience or background. These skills are all they need to also become developers of learning content.

**Recommendation 2: The Texas judiciary should embrace e-Learning as a supplement to traditional educational methods for deputy court clerks.**

E-Learning that is responsive to on-the-job problems that is accessed upon demand may save local training budget dollars. Thus, the Texas judiciary should consider adopting e-Learning methods as an alternative or a supplement to traditional training options. Employees with relevant experience in electronic applications may be actively sought out and involved in new approaches. It is further recommended that CDCAT, in collaboration with other stakeholders, take a leading role to support e-Learning as a new instructional method. CDCAT has the necessary experience and credibility to serve as an early adopter of e-Learning techniques and a potential champion for its application.

**Conclusion 3: Effective training requires more than making materials available online.**

Just because learning is made available online does not make it effective. Instructional strategies should be chosen based on proven learning theories to motivate learners and facilitate deeper processing. This refers to the design architecture of the learning environment which incorporates how the content is presented, how the learning is supported, how assessment is undertaken and how feedback is provided. Key issues such as selective attention, persistence of information, and preventing information overload must be addressed. The literature review shows that a single delivery mode inevitably limits critical knowledge transfer, and that most people acquire knowledge in smaller pieces. Employees often do not need an entire course, but

can benefit from a small piece of information delivered at the right time (Maby, 2001). Providing information using different and modes (such as using simultaneous textual and visual modes), and presenting information in small pieces helps to reduce cognitive load and encourages the learner to absorb information more effectively.

**Recommendation 3: To make the most of the opportunities that e-Learning can offer, adult learning principles and motivational techniques should be incorporated into training materials.**

Distance education is a discipline that subsumes the knowledge and practice of pedagogy, psychology, sociology, economics, business, production and technology. To make the most of the opportunities it offers, appropriate methods should be used, including the following:

- 1) Creation of highly visual content;
- 2) Combination of different forms of content delivery through blended learning methods;
- 3) Addressing relevant information immediately and in the context of the workplace; and
- 4) Allowing interactivity and a high degree of collaboration.

Blended learning should include a combination of online and offline, structured and unstructured, self-paced, and peer-to-peer learning and discussions. Blended learning should also be presented by mixing different didactical approaches.

Similarly, content should be broken up into smaller (five to ten minute), bite-size modules or “nuggets” instead of long courses. Smaller modules (such as job aids, diagrams, short video and audio clips, and podcasts) can be created using fast, and inexpensive or free e-Learning applications. This allows for easy packaging into custom training solutions to satisfy the needs of those who want quick access to just-in-time content. This approach also increases the speed at which people learn, and enables addition of more training modules to existing online

curriculum. These micro-learning activities may also include reading one paragraph of text at a time, memorizing a definition, sorting a set of items by chronological order, selecting an answer to a question, learning a word of the day, etc. The micro-learning idea can be further developed through subscription to a series or a stream of micro-modules offered to all deputy court clerks in the state and delivered in consistent intervals of time (daily, weekly, etc.).

**Conclusion 4: There is significant interest in e-Learning resources among elected Clerks. The Texas judiciary should develop a train-the-trainer program to increase conceptual understanding of e-Learning methods and how it can be used as a resource.**

The findings suggest that e-Learning techniques are gaining momentum and increasing in importance in Texas. Many elected clerks are beginning to embrace available online tools and have a positive attitude and receptiveness towards e-Learning in general. They reported significant interest in online learning resources. More than 60% of respondents indicated that they would like online instructional help and support. In addition, many have employees who are experienced with technology and are in a position to support leadership in its effort to diffuse e-Learning throughout the local clerk's office. This show of interest, coupled with the low amount of funds reserved for training, suggests there is a unique opportunity for the Texas judiciary to leverage e-Learning resources.

Meister (1998, as cited in Kets de Vries and Korotov, 2010, p. 10) argues that involvement and commitment by leaders in the learning process is the most important factor to its success. The literature review also suggests that leaders will have to become immersed in new tools to keep up as new learner demographics change. This poses a challenge for the Texas judiciary. While the findings reflect growing interest in e-Learning, a large number of clerks have a long way to go before they can consider themselves highly engaged with e-Learning

resources. All of the clerk's offices surveyed have the required Web access, as well as adequate hardware and software for basic online instructional delivery.

The barriers holding back the adoption of e-Learning in clerk's offices are more cultural and organizational than technological. A number of respondents noted that they not only have the barriers of lack of time and resources, but a mental barrier toward new technology. They felt it was a slow road to a change of mentality. Cultural issues also include perceptions of high costs, instructor preparation time, and lack of organizational support. Thus, there is a pressing need to share the rationale for use of different e-Learning strategies among the elected clerks and the clerk's offices around the state.

**Recommendation 4: The elected Clerks should be provided with information, support and hands-on experience regarding the use of e-Learning.**

Helping local leaders to understand the concepts behind e-Learning and offering opportunities to experience its tools first-hand will ease its acceptance. Hands-on training should be provided to elected clerks, top management and SMEs at the clerk's offices to encourage understanding of the fundamental concepts of e-Learning. As advocates of new learning methods, pilots can be used to help test what works best. Staff can be assigned to look for emerging trends and ideas in e-Learning, as well as reports on proven practices and techniques; such information can be easily compiled and shared throughout the judicial community. Texas' professional associations may also partner with universities, consultants and IT or software development companies by offering discussion forums and communities, train-the-trainer mentoring, and meeting with noted experts and consultants for instructional assistance. Networking with such organizations as NCSC, NASJE, NACM and others can provide a wealth of information, research and educational expertise that should be sought out. Finally, it is also

recommended that the elected clerks and judicial professional organizations start using at least basic e-Learning technologies, such as videos, podcasts and blogs, to gain experience and comfort with increased use of technology.

**Conclusion 5: An active online learning community supports and encourages learners.**

Even when technology appears to drive the flow of information, it is the social world or network that binds people together (Brown and Duguid, 2000). Collaboration and interaction with others is a key to learning. Interaction allows various forms of learner participation, communication and control; develops respect for another person's perspective; and creates a sense of social presence and personal meaning, as well as a sense of community (Murphy & Cifuentes, 2001, as cited in Ally, 2008, p.20). As a result, many organizations are turning away from single, event-based live training to continuous and collaborative learning to facilitate knowledge sharing. An online learning community would allow a diverse range of individual offices to share ideas, expertise and talents; receive expert advice, answers to teaching problems and mentoring services; discuss common issues; and learn from a breadth of personal experience. It would also allow exchange of teaching resources online. Imagine the authenticity and practical learning experiences that would be facilitated through advice provided online by elected clerks and SMEs.

It must be acknowledged that the elected clerks and SMEs could perceive such activities as an extension beyond their present occupation. Acceptance of e-Learning cannot be imposed upon these individuals; they must want to freely provide their knowledge, experience and time. However, use of a team approach, where each member of the team is able to express his or her own view and contribution, as well as count on support and advice from other members, may help overcome any resistance to change.

**Recommendation 5: The Texas judiciary should establish an online learning community for all District, County and Combination Clerk’s Offices.**

A vibrant online learning community can help participants by creating, storing and sharing training modules such as:

1. Online course tools (quizzes, tests, cases, questions, and learning module evaluations);
2. Collaboration and sharing tools (discussion forums, feedback and annotation, successful student or trainer profiles, and online technology demonstrations);
3. Instructional activities (interactive online tasks, and creative thinking activities); and
4. Web resources (digital libraries of journals, magazines, and government publications of materials selected for a particular course, online research guides and resources, online glossaries, articles, journal links, book recommendations, and newsgroups).

Deputy court clerks who are comfortable working with e-Learning tools can also be engaged in creating learning content and peer-to-peer knowledge sharing between offices. For example, a statewide “Create Content by Learner” project can be initiated, where the best training modules created according to the rules of the governing body (such as length, software used, topics covered, etc.) can be added to the websites of professional organization(s) and used for further training of their peers, while the winners are recognized on a state level. Such initiative can jumpstart an instructional resource exchange program and create a shareable library of reusable content to reduce development costs and speed the delivery of necessary skills training.

## **Concluding Remarks**

One report cannot address all questions related to technology-enhanced training. It provides only a glimpse into what is presently possible in the world of online training and how emerging Web-based training technologies can benefit the judiciary. As with most studies, additional research is needed to confirm and extend the findings reported here. While elected clerks were surveyed in this project, conducting a state-wide survey of deputy court clerks as a targeted audience might provide more reliable and verifiable data on organizational readiness for e-Learning. Further research might also explore the cost of different e-Learning options; the specific problems faced by instructors and learners; the types of tools, activities and content areas that exhibit higher success rates; e-Learning assessment tools, etc. But hopefully, this report serves as a starting point for open discussions of the effectiveness of current training methods for deputy court clerks, to substantiate the importance of its further improvement, and to raise awareness regarding e-Learning as an alternative instructional approach that can supplement existing forms of training. The author also hopes that the ideas proposed will be exposed to critical dialogue and reflection regarding challenges in selecting, developing, and adapting infrastructure and support for electronic content development. Through review within the community of practice, ideas are sharpened. And while this research focused on training of deputy court clerks, the benefits of e-Learning and electronic knowledge sharing programs discussed in this report can be used by any other office within the judiciary to inspire a new kind of learning-driven culture that leads to the success we seek. Without a doubt, technology will increasingly play a role in employee training. As noted in the literature review, there are at least a dozen e-Learning trends that will significantly impact future directions of online training in the next five to ten years, offering unique ways for learners and experts to interact, collaborate, participate in dialogue and make personal contributions. The opportunity that e-Learning offers

should not be ignored by judicial leaders because by empowering the workforce, we ultimately empower the judiciary as well. The cost of overlooking e-Learning might simply be too high.

What do deputy court clerks need in order to interact with information efficiently? First of all, easy access to information through a single interface and the knowledge how to use it is critical. One search should provide all information necessary to perform their duties. Do deputy court clerks have time to search lengthy documents or to look through PowerPoint presentations when the customer is in front of them? How can they quickly find what is written on a particular topic? We need to embed both employees and information within a system that understands the workflow and when the need for information arises. It is not just the information that is vital to the judiciary; it is the exchange of the information within the context of the people and the situation of the moment.

Difficulties maintaining the traditional training format have been encountered. Due to lack of sufficient funding for training, local offices are burdened by staff coverage during employee absences and faced with increasing travel costs. Given all of these challenges, we must face the following question: how can the required education be provided most timely and effectively?"

## References

- Allied HR IQ (2012). Allied workforce mobility survey: Onboarding and retention. Allied Van Lines, Inc. Retrieved from <http://hriq.allied.com/pdfs/AlliedWorkforceMobilitySurvey.pdf>
- Ally, M. (2008). Foundations of educational theory for online learning. In Anderson, T. & Elloumi, F. (Eds.), *Theory and Practice of Online Learning* (2d ed., pp. 3-31). Retrieved from [http://cde.athabascau.ca/online\\_book/pdf/TPOL\\_chp01.pdf](http://cde.athabascau.ca/online_book/pdf/TPOL_chp01.pdf)
- Anderson, T. (2003, October). Getting the mix right again: An updated and theoretical rationale for interaction. *The International Review of Research in Open and Distributed Learning [IRROLD]*, 4(2), Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/149/230>
- Anderson, T. (2008). Toward a theory of online learning. In Anderson, T. & Elloumi, F. (Eds.), *Theory and Practice of Online Learning* (2d ed., pp. 33-60). Retrieved from [http://cde.athabascau.ca/online\\_book/pdf/TPOL\\_chp02.pdf](http://cde.athabascau.ca/online_book/pdf/TPOL_chp02.pdf)
- Aydin, C. H., & Tasci, D. (2005). Measuring readiness for e-Learning: Reflections from an emerging country. *Educational Technology & Society*, 8 (4), 244-257. Retrieved from [http://www.ifets.info/journals/8\\_4/22.pdf](http://www.ifets.info/journals/8_4/22.pdf)
- Bachman, K. (2000). Corporate e-learning: Exploring a new frontier. *Internet Time Blog*. W Hambrecht + Co. Retrieved from <http://www.internetttime.com/Learning/articles/hambrecht.pdf.pdf>
- Berthelemy, M. (2012, August 3). Buzzword: Micro-learning. *Xyleme*. Retrieved from <http://www.xyleme.com/blog/buzzword-micro-learning>

- Bonk, C. J. (2002). Online training in an online world. Bloomington, IN: Jones Knowledge, Inc. & CourseShare.com. Retrieved from [http://www.publicationshare.com/docs/corp\\_survey.pdf](http://www.publicationshare.com/docs/corp_survey.pdf)
- Brown, J. & Duguid, P. (2000). The social life of information. USA: Harvard Business School Publishing Corporation
- Chantrill, C. (2015). State growth and debt rank for 2014. Retrieved from [http://www.usgovernmentspending.com/compare\\_state\\_spending\\_2014bZ0a](http://www.usgovernmentspending.com/compare_state_spending_2014bZ0a)
- Clark, D. (2015, December 4). Defining eLearning. *Performance Juxtaposition*. Retrieved from <http://www.nwlink.com/~donclark/hrd/elearning/define.html>
- Dahdouh, A., Osorio, A., & Caires, S. (2015, October 3). Understanding knowledge network, learning and connectivism. *International Journal of Instructional Technology and Distance Learning*, 12(10), 3-22. Retrieved from [http://itdl.org/Journal/Oct\\_15/Oct15.pdf](http://itdl.org/Journal/Oct_15/Oct15.pdf)
- Deitsch, J. (2013). Web 2.0 technology and use. Retrieved from [http://joannedeitsch.com/wp-content/uploads/2013/06/Web2.0TechnologyandUseinDE\\_070713.pdf](http://joannedeitsch.com/wp-content/uploads/2013/06/Web2.0TechnologyandUseinDE_070713.pdf)
- Downes, S. (2005, October 17). E-Learning 2.0. *eLearn Magazine*. Retrieved from <http://www.downes.ca/post/31741>
- Feldman, S., & Sherman, C. (2001). The high cost of not finding information: An IDC white paper. Framingham, MA: IDC. Retrieved from <http://www.ejitime.com/materials/IDC%20on%20The%20High%20Cost%20Of%20Not%20Finding%20Information.pdf>
- Feldman, S. (2004, March 1). The high cost of not finding information. *KM World*, 13(3). Retrieved from <http://www.kmworld.com/Articles/Editorial/Features/The-high-cost-of-not-finding-information-9534.aspx>

- Fernandes, C., & Galdos, L. (2008). State courts: Are you ready for the future of judicial branch education? *Future Trends in State Courts*. National Center for State Courts. Retrieved from <http://cdm16501.contentdm.oclc.org/cdm/ref/collection/judicial/id/247>
- Forrest, E. (2014, January 29). The ADDIE model: Instructional design. *Educational Technology*. Retrieved from <http://educationaltechnology.net/the-addie-model-instructional-design/>
- Forrester Research. (2014, May 12). US Mobile and tablet commerce to top \$293B by 2018; Total eCommerce to hit \$414B. Retrieved from <https://www.forrester.com/US+Mobile+And+Tablet+Commerce+To+Top+293B+by+2018+Total+eCommerce+To+Hit+414B/-/E-PRE7004>
- Hart, J. (2008, Sept. 22). Understanding today's learner. *Learning Solutions Magazine*. Retrieved from <http://www.learningsolutionsmag.com/articles/80/>
- Hart, J. (2015). Best of Breed Tools 2015, *Centre for Learning & Performance Technologies*. Retrieved from <http://c4lpt.co.uk/directory/top-100-tools/best-of-breed-tools-2015/>
- Hart, J. (2015). Top 100 Tools for Learning 2015, *Centre for Learning & Performance Technologies*. Retrieved from <http://c4lpt.co.uk/directory/top-100-tools/>
- Hearn, D. R. (2014, April 13 [2001]). Education in the workplace: An examination of corporate university models. *New Foundations*. Retrieved from <http://www.newfoundations.com/OrgTheory/Hearn721.html>
- History of e-Learning. (n.d.). *E-Learning Fundamentals*. Retrieved from [http://www.leerbeleving.nl/wbts/1/history\\_of\\_elearning.html](http://www.leerbeleving.nl/wbts/1/history_of_elearning.html)

- Instructional Design Models and Methods. (n.d.). *Instructional Design Central*. Retrieved from [http://www.instructionaldesigncentral.com/htm/IDC\\_instructionaldesignmodels.htm#dickcarey](http://www.instructionaldesigncentral.com/htm/IDC_instructionaldesignmodels.htm#dickcarey)
- Kanuka, H. (2008). Understanding e-Learning technologies-in-practice through philosophies-in-practice. In Anderson, T. & Elloumi, F. (Eds.), *Theory and Practice of Online Learning* (2d ed., pp. 91-118 ). Retrieved from [http://www.aupress.ca/books/120146/ebook/04\\_Anderson\\_2008-Theory\\_and\\_Practice\\_of\\_Online\\_Learning.pdf](http://www.aupress.ca/books/120146/ebook/04_Anderson_2008-Theory_and_Practice_of_Online_Learning.pdf)
- Kets de Vries, M. & Korotov, K. (2010). Developing leaders and leadership development. *INSEAD. The Business School for the World*. Retrieved from <https://www.insead.edu/facultyresearch/research/doc.cfm?did=45346>
- Manyika, J., Chui, M., Bughin, J., Dobbs, R., Bisson, P., & Marrs, A. (2013, May). Disruptive technologies: Advances that will transform life, business, and the global economy. *McKinsey Global Institute: McKinsey & Company*. Retrieved from <http://www.mckinsey.com/business-functions/business-technology/our-insights/disruptive-technologies>
- Masie, E. (2006, January). Nano-learning - miniaturization of design. Retrieved from [http://www.cedma-europe.org/newsletter%20articles/Clomedia/Nano-Learning%20-%20Miniaturization%20of%20Design%20\(Jan%2006\).pdf](http://www.cedma-europe.org/newsletter%20articles/Clomedia/Nano-Learning%20-%20Miniaturization%20of%20Design%20(Jan%2006).pdf)
- McGreal, R., & Elliott, M. (2008). Technologies of online learning (e-Learning). In Anderson, T. & Elloumi, F. (Eds.), *Theory and Practice of Online Learning* (2d ed., pp. 115-135). Retrieved from [http://cde.athabascau.ca/online\\_book/pdf/TPOL\\_chp05.pdf](http://cde.athabascau.ca/online_book/pdf/TPOL_chp05.pdf)

- McKinney, C. (1992). Adult and professional education: An overview. In Tallman, D. (Ed.), *Adult Education Perspectives for Judicial Education* (pp. 2.1-2.13). Retrieved from <http://ncsc.contentdm.oclc.org/cdm/singleitem/collection/judicial/id/427/rec/1>
- Microlearning. (2016, February 16). In *Wikipedia: The Free Encyclopedia*. Retrieved from [https://en.wikipedia.org/wiki/Microlearning#Microlearning\\_applications\\_.28examples.29](https://en.wikipedia.org/wiki/Microlearning#Microlearning_applications_.28examples.29)
- Minton, M. (2000). Is your organization ready for e-learning? Seven key questions you need to answer. *Communication Project Magazine*, 3.1. Retrieved from <http://www.comproj.com/Minton.htm>
- Murdock, S., White S., Hoque, N., Pecotte, B., You, X., & Balkan, J. (2002). A summary of the Texas challenge in the twenty first century: Implications of population change for the future of Texas. The Center for Demographic and Socioeconomic Research and Education. *Department of Rural Sociology Texas A&M University System*. Retrieved from <http://www.qualitylearning.net/community/brownsville/resources/Implications%20of%20Population%20Change%20for%20the%20Future%20of%20Texas.pdf>
- Niebuhr, V., Niebuhr, B., Urbani, M. J. & Trumble, J. (2014). Software for Creating E-Learning Materials. *Adapting Teaching Materials for “Any Day Any Place Teaching”*. University of Texas Medical Branch. Retrieved from [http://www.utmb.edu/pediedtech/pdf/Software\\_for\\_Creating\\_Online\\_Materials.pdf](http://www.utmb.edu/pediedtech/pdf/Software_for_Creating_Online_Materials.pdf)
- Pappas, C. (2012, July 22). Free Authoring Tools for eLearning. *eLearning Industry*. Retrieved from <http://elearningindustry.com/free-authoring-tools-for-elearning>

- Pappas, C. (2012, July 29). The Ultimate list of Open Source Learning Management Systems. *eLearning Industry*. Retrieved from <http://elearningindustry.com/open-source-learning-management-systems>
- Perez, S. (2008, April 20). Enterprise 2.0 to become a \$4.6 billion industry by 2013. Retrieved from [http://readwrite.com/2008/04/20/enterprise\\_20\\_to\\_become\\_a\\_46\\_billion\\_industry](http://readwrite.com/2008/04/20/enterprise_20_to_become_a_46_billion_industry)
- Prensky, M. (2001, October). Digital natives, digital immigrants. *On the Horizon*. 9(5). Retrieved from <http://marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>
- Queeney, D. (1992). Needs assessment. In Tallman, D. (Ed.), *Adult Education Perspectives for Judicial Education* (pp. 3.1-3.19). Retrieved from <http://nsc.contentdm.oclc.org/cdm/singleitem/collection/judicial/id/427/rec/1>
- Riva, A. (2012, November 24). What if Texas really were its own country? *International Business Times*. Retrieved from <http://www.ibtimes.com/what-if-texas-really-were-its-own-country-880112>
- Rogers, P. L. (2002). *Designing instruction for technology-enhanced learning*. Hershey, PA: Idea Group Publishing.
- Schlenker, B. (2008, August 25). What is E-Learning 2.0? *Learning Solutions Magazine*. Retrieved from <http://www.learningsolutionsmag.com/articles/83/what-is-e-learning>
- Schumacher, E.F. (1973, August). Small is beautiful. *The Radical Humanist*, 37 (5), p. 22. Retrieved from <http://babel.hathitrust.org/cgi/pt?id=uc1.32106019678082;view=1up;seq=230>
- Singh, H. & Reed, C. (2001). A white paper: Achieving success with blended learning. Centra Software. Retrieved from <http://www.leerbeleving.nl/wbts/wbt2014/blend-ce.pdf>

- Singh, H. (2003, November/December). Building effective blended learning programs. *Educational Technology*, 43(6), 51-54. Retrieved from [http://asianvu.com/digital-library/elearning/blended-learning-by\\_Singh.pdf](http://asianvu.com/digital-library/elearning/blended-learning-by_Singh.pdf)
- Spiro, K. (2014, February 25). 5 eLearning trends leading to the end of the learning management system. eLearning Industry. Retrieved from <http://elearningindustry.com/5-elearning-trends-leading-to-the-end-of-the-learning-management-system>
- Tallman, D. E. (1992). Organizational change and development. In Tallman, D. (Ed.), *Adult Education Perspectives for Judicial Education* (pp. 12.1-12.23). Retrieved from <http://nsc.contentdm.oclc.org/cdm/ref/collection/judicial/id/427>
- Texas. (2015, December 23). In *Wikipedia: The Free Encyclopedia*. Retrieved from <https://en.wikipedia.org/wiki/Texas>
- Texas Government Code (2015). (Cited as “Tex. Gov. Code § 51.605”). Retrieved from <http://www.statutes.legis.state.tx.us/Docs/GV/htm/GV.51.htm>
- Texas Local Government Code (2015). (Cited as “Loc. Gov. Code, Ch. 117”) <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.117.htm>
- Texas Office of Court Administration. (2015). Annual statistical report for the Texas judiciary. Fiscal Year 2014. Texas Judicial Branch. Retrieved from <http://www.txcourts.gov/media/885306/Annual-Statistical-Report-FY-2014.pdf>
- Thalheimer, W. (n.d.) Subscription Learning. Retrieved from <http://www.subscriptionlearning.com/>
- Trybus, J. (2014). Game-based learning: What it is, why it works, and where it’s going. *New Media Institute [NMI]*. Retrieved from <http://www.newmedia.org/game-based-learning--what-it-is-why-it-works-and-where-its-going.html>

Types of e-Learning (n.d.). *E-Learning*. Retrieved from <https://sites.google.com/site/csmokre21/>

Urduan, T. & Weggen, C. (2000, March). Corporate e-Learning: exploring a new frontier.

*WRHambrecht + Co.* Retrieved from

[http://cclp.mior.ca/Reference%20Shelf/PDF\\_OISE/Corporate%20e-learning.pdf](http://cclp.mior.ca/Reference%20Shelf/PDF_OISE/Corporate%20e-learning.pdf)

Wahlstrom, B. (1985). What does user-friendly mean anyway? *Computers and Composition an*

*International Journal*, 3(1), 13. Retrieved from

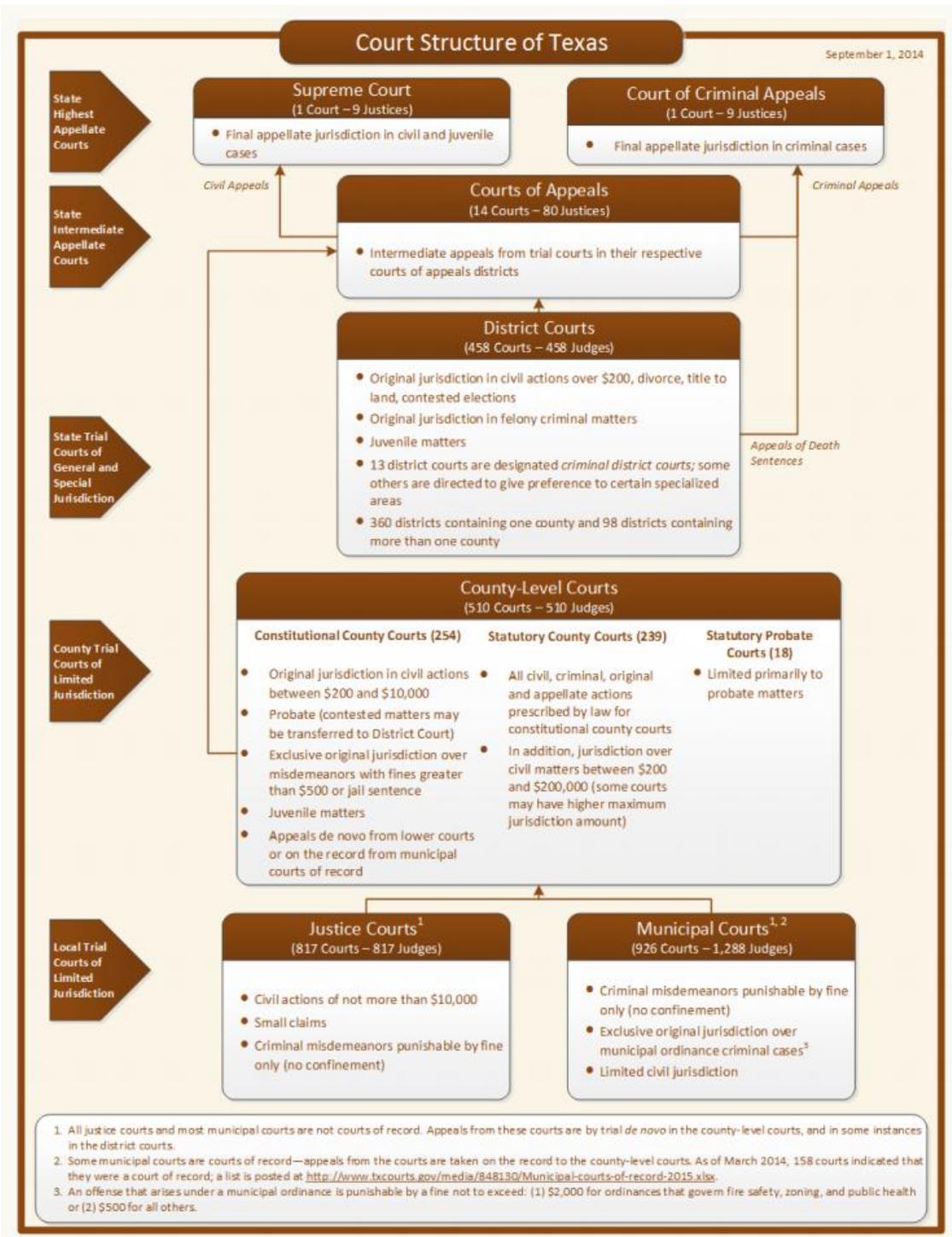
[http://computersandcomposition.candcblog.org/archives/v3/3\\_1\\_html/3\\_1\\_2\\_Wahlstrom.](http://computersandcomposition.candcblog.org/archives/v3/3_1_html/3_1_2_Wahlstrom.html)

[html](http://computersandcomposition.candcblog.org/archives/v3/3_1_html/3_1_2_Wahlstrom.html)

Williams, S. (n.d.) Front end analysis and evaluation for distance learning: Internet research for paralegals. Retrieved from

<http://sandraconsulting.com/proposals/assessment/frontendanalysisevaluationplan.pdf>

## Appendix A. Texas Court Structure<sup>21</sup>



<sup>21</sup> Source: from “Annual Statistical Report for the Texas Judiciary, 1 Sept. 2014,” Texas Office of Court Administration, p. 3. Retrieved from <http://www.txcourts.gov/media/885306/Annual-Statistical-Report-FY-2014.pdf>

## Appendix B. Currently Offered Training Materials <sup>22</sup>

County and District Clerk Association of Texas - <http://www.cdcatexas.com/Resources/Manuals>

Name	Contents	Format	No. Pages
2013 District Clerk Manual	Jury; Case Processing & Costs of Court; Issuance of Processes; Indexing & Recording Minutes; Administrative Support of District Courts; Registry of the Court; Ancillary Proceedings; Appeals; Expunction & Removal; Family Law & Parent-Child Relation Cases; Juvenile Cases; Parental Notification; Record Retention & Management; Other Duties; AG Opinion Index; Form; Reporting	PDF	227
2013 County Clerk Manual	Various Information Pertaining to the County Clerk's duties	PDF	216
County Clerk Reference Guide	Access & Copy of OPR (property) & Court Records; Record Management & Fees; OPR (property) and Vital Statistics; Courts; Authority and Duties as Elected Official; Disaster Recovery and Technology; Personnel; Commissioners Court	PDF	300
County Clerk – State Library and Archives Records Retention Schedule	State Library and Archives Records Retention Schedule	PDF	89
District Clerk- State Library and Archives Records Retention Schedule	State Library and Archives Records Retention Schedule	PDF	43
E-File Playbook for Texas	E-Filing in Texas	PDF	115
84 <sup>th</sup> Legislative Session	84 <sup>th</sup> Legislative Session Updates Related to Clerk's Duties	PDF	69
2015 Probate School	Property Distribution Upon Death; Probate Essentials and Glossary of Terms; Muniment of Title, Letters Testamentary and Small Estates; Independent Administration, Dependent Administration Clerks Responsibilities for the Safekeeping of Wills Certifying and Exemplifying Wills, Foreign Wills, Bonds and Claims Reporting Requirements E-Filing Guardianships Guardianship Handout Guardianship Forms Legislative Update	Web Pages, PDF <sup>23</sup>	56 3 69 64 28 51 21 19 18 18 122 31 56
Records Retention -2015	Records Management for County and District Clerk	PDF	73
Recording 101	Recording Procedure	PDF	46
2014 – FAX/ Electronic Filing Freq. Q & A	Fax Filings, Original Signatures and More Rules and Procedures	PDF	2
E-File- Navigation the Road to E-Filing	E-Filing Rules (Supreme Court Order), E-Filing Technology Standards, Educating Filers/Reviewers;	PDF	95

<sup>22</sup> Learning materials presented here are posted on the County and District Clerks Association of Texas and Texas Association of Counties web-sites. More materials (such as webinars, online training, etc.) regarding technology are offered by Tyler Technologies and e-FileTexas. Texas Office of Court Administration offers materials regarding the state reporting.

<sup>23</sup> Most of the documents listed in the table as PDF files are actually scanned in PDF format Power Point event presentation slides

	Financial; Infrastructure; Processes; Sensitive Data Collection, Q & A		
Emergency Management Tips for County and District Clerks	Practical tips on how to prepare for, and continue operations after, a disaster	PDF	21
2014 Writ Summary for Clerks	Clerk's Summary Sheet Form	Word	1
2014 11.07 Writ Form	Court of Criminal Appeals of Texas Application for a Writ of Habeas Corpus	Word	20
Probate to Estate- Conversion Chart 2014	Probate Code to Estates Code chapter/section conversion chart	PDF	45
2014 County Clerk FAQ & A	Q & A regarding recording procedures	Word	8
Civil Cases Relating to Criminal Matters Table	Explanatory Chart	Word	4
SOS- Clerks Reporting Requirements to the Voter Register	Information in juror questionnaire forms, what information is required to be reported to the county voter registrar, and what the county voter registrar shall do with the information that is reported	Word	9
Challenging Constitutionality	Noticed mailed to const_claims@texasattorneygeneral.gov	PDF	
County Clerk Reporting Requirements- Dec 2012	Reporting Requirements Summary table	PDF	8
County Clerk Reporting Requirements- Sept 2013	Reporting Requirements Summary table	PDF	8
The Law Controlling Access to Clerk's Record	Collection of materials	PDF	25
Expunction Flowchart	Expunctions Procedure under Code of Criminal Procedure Sec. 55.02 (updated April 2012)	PDF	3
Expunction Presentation	Expunctions and Non- Disclosures	PDF	18
Legislative Session	District Clerk Legislation for Session 82R (HB & SB)	PDF	8
	District Clerk Legislation for Session 83R (HB &SB)	PDF	4
	District Clerk Legislation for Session 84R (HB & SB)	PDF	6
	County Clerk Legislation for Session 82R (HB &SB)	PDF	7
	County Clerk Legislation for Session 83R (HB &SB)	PDF	4
	County Clerk Legislation for Session 84R (HB &SB)	PDF	4
2015 Winter Newsbrief	Rule 902(10) Texas Rules of Evidence is amended. Relief for Clerks? Required Reporting to OCA; CDCAT 84 <sup>th</sup> Session Legislative Initiatives; Courts Closure and Reopening Reporting Requirements	PDF	11
2015 Spring Newsbrief	Jane's Due Process (legal representation for pregnant minors in Texas; 84 <sup>th</sup> Legislative Session; Rule 21c Sensitive Data; Fingerprint- Keep Original or Not?; Reporting Requirements; E-File Challenges; and other	PDF	13
Orders and Opinions	GA1034-2014 Criminal Court Costs after Probation Completed	PDF	4
	GA1035-2014 Juvenile Records Confidential – Misdemeanor cases	PDF	5
	Efiling Mandate - Final Supreme Court Order 2013	PDF	67
	Service Return – Supreme Court Order	PDF	9
	Expedited Foreclosure- Supreme Court Order	PDF	10

**Texas Association of Counties ([www.county.org](http://www.county.org))**

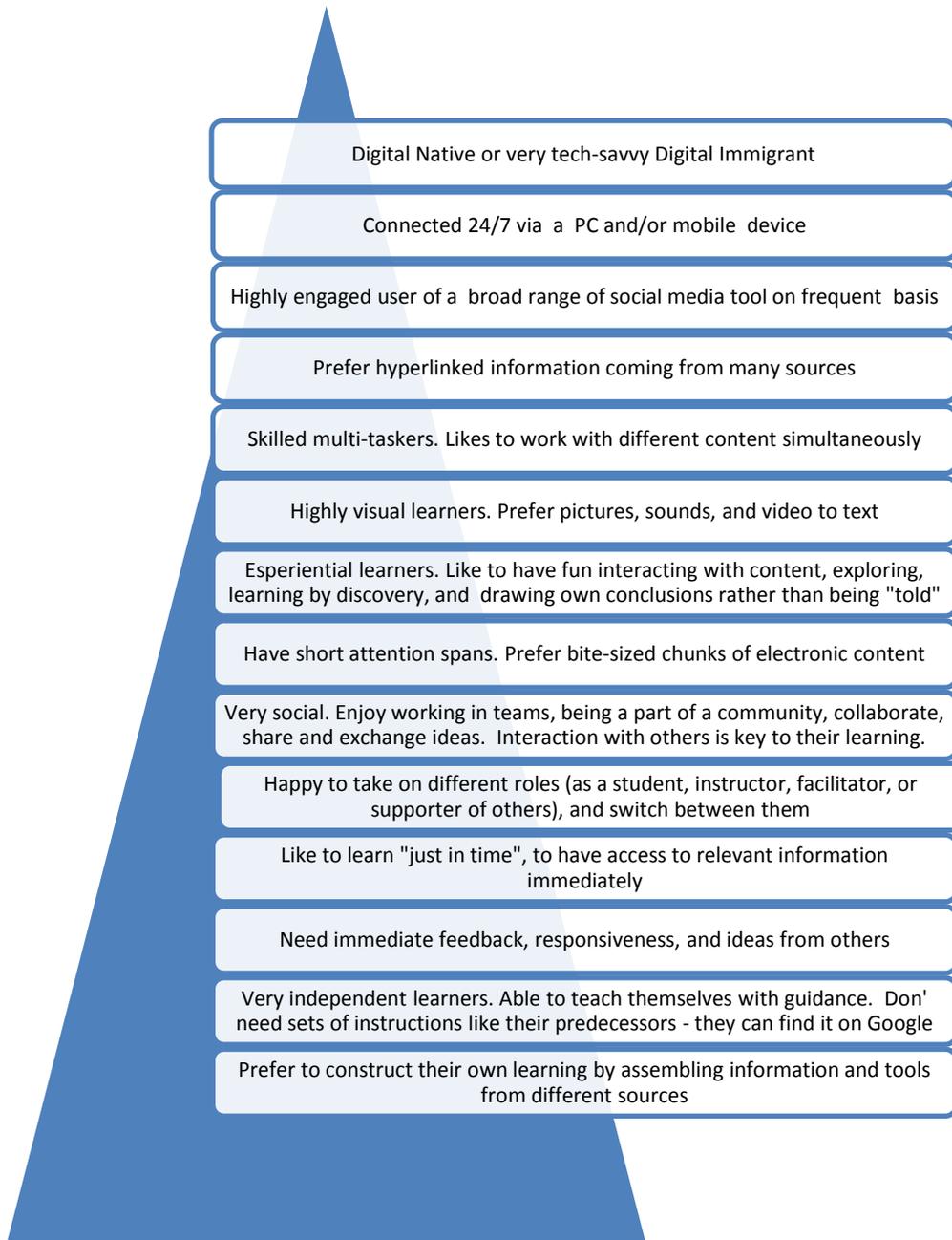
Code of Judicial Conduct	Code of Judicial Conduct	Web Page	NA
--------------------------	--------------------------	----------	----

County Judges- Benchbook	Criminal, Guardianship, Juvenile, Mental Health, Probate, Civil, Protective Order, Contempt Proceedings and Scripts, Judicial Ethics	Web Pages, PDF	235
2014 Guide to Texas Laws for County Officials	Description of Office: Duties and Responsibilities	PDF	160
Electronic Solutions- Moving Your Courts to Paperless	Electronic Courts for Non-Vendor Case-Management Systems: Court Approval; Scanning/Planning; Integration with eFileTexas.gov; Website Features; Electronic Signatures; Civil vs Criminal; Criminal Electronic Solutions	PDF	60
Jane's Due Process	Texas Judicial Bypass Procedure	PDF	33
Civil Suits- Transitioning to a Paperless Court Environment	EFiling in Collin County, Texas, District Clerk's Office		11
Civil Unions, Marriage-Vitals	Marriage License Issuance Process	PDF	40
Occupational Driver's License	What is an Occupational License; Eligibility, Requirements	PDF	4
Civil Fees and Issuance of Processes for County Clerks	FY 2016 Civil Fee Changes	PDF	5
Legislative Updates Relating to Civil Courts	84 Legislative Session (the list of House and Senate Bills)	PDF	4
How the Texas Supreme Court Rulemaking Process Works	Rule 736 Expedited Foreclosure Forms		31
Reporting Requirements Associated with Civil Cases	Judicial Council Monthly Court Activity Reports	PDF	14
Tips on Preparation of Letters Rogatory and Out-of-State subpoena	Letters Rogatory and Out-of-State subpoena: Processes, fees and more	PDF	21
Civil and Family Fees	Civil and Family Fees and Related Legislative Updates	PDF	24
Department of Public Safety CJIS Reporting- Compliance	Offense Codes, Computerized Criminal History; CJIS Completeness Requirements	PDF	30
Criminal E-File Rules, Standards and Moving to an Electronic Solution	Criminal eFiling (update, rules, standards); Moving Towards the Electronic Solutions (Judicial and Attorney Access; OCA Equipment for Counties)	PDF	13
Criminal Evidence Preservation	Evidence Preservation and Storage	PDF	62
Clerks' Responsibilities in the Appeals Process from the Justice of the Peace	Criminal Appeals: From Justice and Municipal Courts	PDF	25
Criminal Fees with Legislative Updates	Various Information	PDF	25
Jury/Grand Jury	Grand Juries & Petit Juries	PDF	49
Evolution of a Criminal Case at the District Court Level	Evolution of a Criminal Case at the District Court Level: Process from Beginning to End	PDF	92
Criminal Discovery Requirements	Criminal Discovery Requirements/ Electronic Solutions for Discovery	PDF	47
Criminal Appeals to Court of Appeals	E-Filing to the Court of Appeals	PDF	10
Probate/ Mental Health	Probate and Mental Health Procedures	PDF	79
Navigating Juvenile Justice: Understanding Juvenile Files and Records	Overview with Juvenile Records Provisions in Title 3 of the Family Code and Related Laws; Recent Legislative Changes Affecting Sealing and Restricted Access	PDF	58
Update on Truancy Prevention Measures	The 2015 Truancy Reform Bill- House Bill 2398	PDF	32
E-Filing	The Evolution of e-File, Fall 2015	PDF	15
Courtroom Technology	Truancy Legislation- 84 <sup>th</sup> Legislature	PDF	29
County Budgeting	County Budgeting: 2015 Fall Judicial	PDF	48
Heirship Proceedings	The Intestacy Manual 2016 for Proceedings in Texas	PDF	57

	Probate Courts		
Ethics: Social Media and the Judiciary	Ethical Rules in High-Tech World	PDF	83
Guardianship	Guardianship proceeding in Texas	PDF	70
Protective Orders	Family Violence Protective Orders Proceedings	PDF	26
Suppression Hearings	Suppression Hearings and Suppression Topics in General & in DWI Offenses	PDF	62
Hearsay	The Hearsay Rule and Its Exceptions	PDF	24
Bond Forfeiture- Is it Criminal or is it Civil?	Bond Forfeiture proceedings	PDF	10
Juvenile Hearings	Juvenile proceedings	PDF	11
Mental Health- Application to Commitment	Mental Health Forms		43
Plea Bargains	Pretrial intervention and Other thoughts on plea bargaining	PDF	46
Contempt	Contempt of Court Proceeding	PDF	9
The Office of County Clerk		PDF	5
Social Media	Social Media: In the Court and as an Employer (ethics)	PDF	15
Probate Distribution Upon Death- Texas Style	Probate proceedings	PDF	56
Probate Essentials and Glossary of Terms	Glossary of Probate Terms	PDF	3
Muniment of Title, Application for Letters Testamentary and Small Estates	Applications to Probate and Small Estate Affidavit	PDF	69
Independent Administration, Dependent Administration and Determination of Heirship	Probate proceedings in Texas	PDF	64
Clerks Responsibilities for the Safekeeping of Wills	Will Safekeeping Procedures	PDF	28
Certifying and Exemplifying Wills, Foreign Wills, Bonds and Claims	Ancillary filings; Certified Copies; Claims and Bonds; Fee Schedule	PDF	51
Reporting Requirements	Clerk's Reporting Requirements	PDF	21
Reporting Requirements	Various materials	PDF	41
e-Filing	e-Filing process	PDF	19
Guardianships	Guardianship proceeding in Texas	PDF	18
Guardianship Handout	Probate Academy Guardianships	PDF	122
Guardianship Forms	Forms	PDF	31
Legislative Update	2015 Texas Estate and Trust Legislative Update	PDF	42
Understanding Human Behavior	Satisfying the Needs of People and the Needs of the Organization	PDF	10
Discrimination and Harassment Prevention Training for Employees	Different Types of Harassment; Legal Issues; County Policy	PDF	10
Mental Health Law	Mental Health Proceedings in Texas	PDF	11
Legislative Update	Working with the Legislature	PDF	10
Overview of the Judicial System	Judicial system in Texas	PDF	12
Mock DWI Trial	Burden of Proof, Trial Phases, and Other Information	PDF	12 +
Appointment of Counsel	Fair Defense Law: A Primer for Texas Officials	PDF	103
Docket Management	Maintaining Control of the Court's Caseload	PDF	18
Contempt Proceedings	Overview of Contempt Proceeding	PDF	7
Judicial Immunity	So You Think You Can't Be Sued	PDF	33
On-line Legal Resources	Legal Authorities and Legal Research	PDF	24
General Overview of the Juvenile	Navigating the Juvenile Justice System	PDF	10

Justice System			
Social Media and Ethics	Concerns & Challenges ; Electronic Social Media	PDF	29
Recusal and Disqualifications, Transfers and Visiting Judges	Recusals, Absences, Disappearances, and Other Considerations	PDF	11
Probate Basics: Intestacy, Wills and Estate Administration	Overview of Texas Probate Law	PDF	25
Mental Health	Judicial Orientation: New County Judges: Mental Health	PDF	20
Setting, Amending and Revoking Probation	Adult Probation: Terms, Conditions and Revocation	PDF	9
Reporting Requirements: Reports submitted to OCA	Judicial Council Monthly Court Activity Reports	PDF	58
Mental Health Cases and Protective Orders	Required Reporting for the National Instant Criminal Background Check System	PDF	29
Collection Improvement Program	Guidelines and Requirements		24
Multiple Languages in Court	Multiple Languages in Court and the OCA Language Access Program	PDF	31
How to Give Legal Information Without Giving Legal Advice	Ethical Considerations	PDF	38
Records Management for County and District Clerks	What is Records Management? Why Do We Have RM Laws/rules? Records Life Cycle and other info	PDF	72
Top Ten Things I wish I Knew Before I Became a Clerk	Pro Se Litigants, Jury Duty, Budgets, and other information	PDF	16
Keynote: The Art of Fishing	The Art of Fishing: Feeding Your Team for a lifetime (Leadership excellence)	PDF	48
Problem Areas with the Potential to Cost you Credibility or Your Job	Challenge to Holding Office, Removal, Official Misconduct and other informatin	PDF	30
CJIS/JJIS Reporting	Criminal Justice Information System (CJIS Overview, CJIS Site; CJIS Resources)	PDF	24
County Clerks-Panel Discussion	Recording 101	PDF	46
Office of Court Administration Monthly Reports	Judicial Council Monthly Court Activity Reports	PDF	73
E-filing	What's Next with eFiling?	PDF	18
Legal Liabilities	Federal and State Employment Laws	PDF	23
Registry of the Court	Information Pertaining to Maintenance of Court Registry Funds	PDF	26
Texas Court of Criminal Appeals	Texas Court of Criminal Appeals: New Rules and Updates	PDF	19

## Appendix C. Profile of Learner 2.0.<sup>24</sup>



<sup>24</sup> Source: Adapted from "Understanding today's learner," by Hart, J., 2008, *Learning Solutions Magazine*. Retrieved from <http://www.learningsolutionsmag.com/articles/80/>

## Appendix D. Glossary of e-Learning Terms<sup>25</sup>

<b>Application Service Provider (ASP)</b>	An application service provider is a specialized form of an Internet service provider (ISP) that allows a company to have a software application hosted via a rental fee. An ASP sells access to a “packaged application” that it typically will license from an applications vendor. The software license is paid for up front and/or on a fee basis. ASPs provide IT operations expertise (offering the necessary application functionality, hardware, database and networking services, etc.) and frequently also business operation expertise in a particular market niche or in a particular functional area (such as human resources or logistics management). Sophisticated ASPs bundle value-added content, such as benchmarking data and patent information, and/or service trading communities and other groupings of companies, such as industry consortiums, that want to share information and the cost of technology.
<b>Asynchronous learning</b>	A learning event in which people are not online at the same time and cannot communicate without time delay. Examples are self-paced courses taken via Internet or CD-ROM, Web presentations, videotaped classes, streamed audio/video presentations, Q&A mentoring, online chats and discussion groups, and e-mail.
<b>Authoring tools / authoring systems</b>	Software applications for creating course interactive material. Authoring tools are designed to help the user create online modules that bring together all components of a course: text presentations, graphics, links, questions, and tracking of student performance. They also let the user add materials created in other software, such as video and audio clips, specialized graphics, and animations. Types of authoring tools include instructionally focused authoring tools, Web authoring and programming tools, template-focused authoring tools, knowledge capture systems, text and file creation/linkage systems, etc.
<b>C-learning</b>	See Instructor-led training.
<b>Certification</b>	Professional certification is a screening tool and a measurement of skills and knowledge. Certification credentials give employees and clients proof of an individual’s level of specialization in his or her field of work.
<b>Community</b>	See Online community.
<b>Computer-based training (CBT)</b>	Course or educational material presented on a computer, primarily via CD-ROM or floppy disk. Unlike Web-based training, computer-based training does not require a computer connected to a network and does typically not provide links to learning resources outside of the course.

---

<sup>25</sup> Source: From “Corporate e-learning: Exploring a new frontier,” by Bachman, K., 2000, *Internet Time Blog*, Glossary, p.83. Ninth House Network and WR Hambrecht+ Co. Retrieved from <http://www.internettime.com/Learning/articles/hambrecht.pdf.pdf>

<b>Content</b>	The intellectual property and knowledge to be imparted. It consists of the course outline, text-based knowledge modules for learning, and multimedia. Content is the most important investment and asset of e-learning. Different types of e-learning content include text, audio, video, animation, and simulation content.
<b>Distance learning</b>	Educational situation in which the instructor and students are separated by time, location, or both. Education or training courses are delivered to remote locations via synchronous or asynchronous means of instruction, including written correspondence, text, graphics, audio and videotape, CD-ROM, online learning, audio and video-conferencing, interactive TV, and facsimile. Distance learning does not preclude the use of the traditional classroom. The definition of distance learning is broader than and entails the definition of e-learning.
<b>E-learning</b> = Technology-based learning	Covers a wide set of applications and processes such as Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audio/video tape, satellite broadcast, interactive TV, and CD-ROM. In this report, the term e-learning is used synonymously with technology-based learning.
<b>ERP application training</b>	ERP stands for enterprise resource planning. ERP applications training is an area of IT training which combines training on accounting software, project management software, maintenance management software, and human resource management and payroll software.
<b>E-training</b>	See Technology-based training.
<b>Extranet</b>	A local area network (LAN) or wide area network (WAN) using TCP/IP, HTML, SMTP, and other open Internet-based standards to transport information. An extranet is only available to people inside and certain people outside an organization, as determined by the organization.
<b>Hosting</b> =Web hosting	Outsourcing of the technology and commerce parts of a company's Internet-based learning system to an outside organization.
<b>Instructor-led training (ILT)</b> = C-learning	Standard face-to-face training in a classroom or lab. The term instructor-led training is used synonymously with on-site training and classroom training (c-learning).
<b>Internet</b>	Worldwide network of networks that are connected using special communication protocols such as TCP/IP and SMTP/MIME. It provides e-mail, file transfer, remote log-in, news, and other multimedia hypertext services. The Internet is also the TCP/IP-based interconnection of servers worldwide that provides communications and application services to an international base of businesses, consumers, educational institutions, governments, and research organizations.

<p><b>Internet-based training</b>  = Web-based training (WBT)  = Online training</p>	<p>Delivery of educational content via a Web browser over the public Internet, a private intranet, or an extranet (LAN/WAN). Internet-based training provides links to learning resources outside of the course, such as references, e-mail, bulletin boards, and discussion groups. It provides the advantages of computer-based training (CBT) while retaining advantages of instructor-led training. The term Internet-based training is used synonymously with Web-based training and online training.</p>
<p><b>Intranet</b></p>	<p>A local area network (LAN) or wide area network (WAN) using TCP/IP, HTML, SMTP, and other open Internet-based standards to transport information. An Intranet is owned by the corporation and only accessible to people working internally in an organization. It is protected from outside intrusion by a combination of firewalls and other security measures.</p>
<p><b>IT training</b></p>	<p>Refers to a combination of desktop training and information systems/technical training. It includes training in areas such as: 1) system infrastructure software (network management, security software, system-level software, system management software, middleware, serverware, etc.); 2) application software (word processing, ERP application training, sales force automation, e-mail, groupware, conferencing software, desktop publishing, industry-specific applications, etc.); and 3) application development tools (information access tools and programmer development tools).</p>
<p><b>Knowledge management</b></p>	<p>Refers to capturing, organizing, and storing knowledge and experiences of individual workers and groups within an organization and making it available to others in the organization. This includes formal corporate information (policies, procedures, and product information), informal information (documents, reports, presentations, and proposals), and expertise (recorded in documents like lessons learned, stories, and case histories). The information is stored in a special database called a knowledge base.</p>
<p><b>Learning portal</b></p>	<p>Any Web site that offers learners or organizations consolidated access to learning and training resources from multiple sources. Learning portals can be grouped into content consolidation portals, embedded technology portals, internal portals, community &amp; collaboration portals, and affiliation portals. Operators of learning portals are also called content aggregators, distributors, or hosts.</p>

<b>Learning Service Provider (LSP)</b>	An LSP is a specialized type of ASP offering learning management and training delivery software on a hosted/rental basis via diverse business models. There are four different types of LSPs: 1) full service LSPs (customizing, implementing, and hosting a complete software solution via a private network); 2) content specific LSPs (licensing content to an organization and providing a level of learning management services to the buyer); 3) tool specific LSPs (licensing and hosting their specific system to an organization); and 4) portal LSPs (hosting a portal site and bundle the learning system in the background). LSPs also include value-added resellers (VAR) and companies providing certification and testing services, online collaboration services, media production and delivery services, and online tutoring.
<b>Multimedia</b>	Encompasses interactive text, images (animated, still, graphics, photographic, streaming), sound, and color. Multimedia can be anything between a PowerPoint slide show and a complex interactive simulation.
<b>Online community</b>	Online communities are meeting places for learners on the Internet designed to facilitate interaction and collaboration among people who share common interests and needs. Most are drawn by the opportunity to share a sense of community with like-minded strangers, regardless of where they live. Intra-company communities can be distinguished by goal: there are communities of practice (employees within the same practice or department sharing information), communities of learning (study groups), and communities of purpose (project groups, product development groups, etc.).
<b>Online learning / training</b>	See Internet-based training.
<b>Portal site</b>	See Learning portal.
<b>Simulations</b>	Highly interactive applications that allow the learner to model or role-play in an actual scenario or business situation. Simulations enable the learner to practice skills or behaviors in a risk-free, simulated environment.
<b>Soft skills training</b>	Encompasses education on specific business areas, such as communications and presentation skills, leadership and general management skills, human resources, sales and marketing, professional development, project and time management, customer service, team building, administrative skills, accounting and finance, purchasing, and personal development, with the goal of improving the knowledge and performance of employees. For the purpose of this report, it comprises all kinds of training that are not related to IT or PC applications training.

<b>Synchronous learning</b>	A real-time, instructor-led online learning event in which all participants are logged on at the same time and communicate directly with each other. Synchronous learning is led by an instructor who maintains integrated classroom control, with the ability to “call on” participants who raise their electronic hands from a distant location. Students and teachers use a “white board” to see work in progress and share knowledge. Content can be delivered using live online courses (virtual classrooms), audio/video conferencing, Internet telephony, and two-way live broadcasts of lectures to students in a classroom.
<b>Technology-based training (TBT) = E-training</b>	Includes the delivery of content via Internet, intranet/extranet (LAN/WAN), satellite broadcast, audio/video tape, interactive TV, and CD-ROM. Technology-based training includes computer-based training (CBT) and Web-based training (WBT). For the purpose of this report, the term technology-based training is used synonymously with e-training.
<b>Text-based training</b>	Includes the delivery of content through books and manuals.
<b>Training</b>	The act of teaching or learning new information, behavior, skills, or actions that can be used to perform job-specific tasks or improve performance.
<b>Training management systems</b>	Internet-based software that deploys, manages, tracks, and reports on interaction between a) the learner and the content, and b) the learner and the instructor. In particular, training management systems perform student registration, track learner progress, record test scores, and indicate course completions, and finally allow instructors/trainers to assess the performance of their students.
<b>Value-added services</b>	Value-added services in the context of the e-training industry include custom training needs assessment and skill gap analysis, curriculum design and development, pre- and post-training mentoring and support, training effectiveness analysis, reporting and tracking tools, advisory services and implementation consulting, hosting and management of Internet/intranet-based learning systems, integration of enterprise training delivery system, etc. Deployment and ranking of value-added services vary between the IT training and soft skills training market segments considerably.
<b>Web-based training (WBT)</b>	See Internet-based training.

## Appendix E. Synchronous and Asynchronous e-Learning Methods<sup>26</sup>

<b>Asynchronous Learning</b>	<b>Synchronous Learning</b>
Documents and Web Pages	<b>Physical Formats</b>
Job Aids	Instructor-led Classrooms & Lectures
Web/Computer –Based Training Modules	Hands-on Labs & Workshops
Assessments/Tests & Surveys	Field Trips
Simulations	Telephone
Electronic Performance Support Systems (EPSS)	<b>Live E-Learning</b>
Recorded Live Events	E-Meetings
Online Learning Communities and Discussion Forums	Virtual Classrooms
Quick Reference Guide	Web Seminars and Broadcasts
Self-paced courses via Internet or CD-Rom	Online Coaching
Q & A mentoring	Chat/ Instant Messaging
Videotaped classes	E- Conferencing/ Screen Sharing
Audio or Video Web presentations or seminars	Audio/Video Conferencing
Recorded Audio Tapes	Live Television Broadcast
	Two-way live satellite broadcast

---

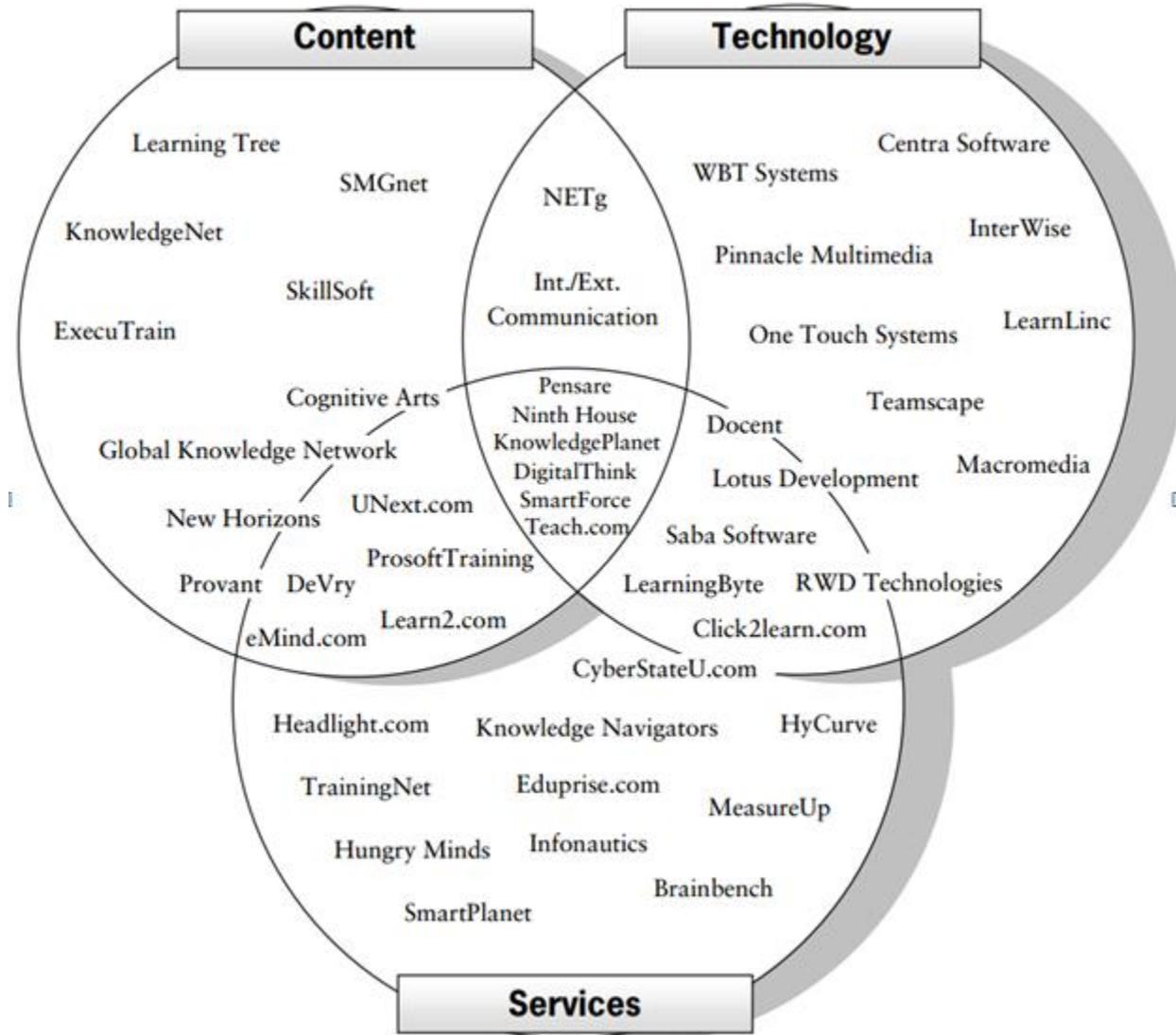
<sup>26</sup> Source: adapted from “Blend the learning solution,” History of e-Learning. *e-Learning Fundamentals*. Retrieved from [http://www.leerbeleving.nl/wbts/1/history\\_of\\_elearning.html](http://www.leerbeleving.nl/wbts/1/history_of_elearning.html)

## Appendix F. E-Learning Market Segments<sup>27</sup>

CONTENT	KEY PLAYERS
<p>Content providers author and publish intellectual property that may use a variety of training delivery methods and media. This segment includes customized and off-the-shelf courseware, synchronous and asynchronous course delivery, linear and branched content, and complex multimedia simulations for soft skills and/or IT training.</p> <p>Certain e-learning vendors license content from large brandholders among academic institutions or professional associations and develop libraries of online classes targeting the B2B, B2C, and post-secondary education markets.</p> <p>Several publishers of content have started to add services, such as custom curriculum design, skills assessment and testing, strategy and development consulting, program implementation and integration support, coaching and mentoring, training effectiveness analysis, and hosting, to their product offerings.</p>	<p><b>Pure online plays – Publishers:</b> SmartForce, Ninth House Network, Teach.com, DigitalThink, NETg, Cognitive Arts, SMGnet, SkillSoft, Internal and External Communication (IEC)</p> <p><b>Pure online plays – Licensers:</b> Pensare, UNext.com, eMind.com, University Access</p> <p><b>Traditional classroom training companies:</b> Provant, New Horizons Worldwide, Learning Tree International, DeVry, ARIS Corporation, Franklin Covey, Global Knowledge Network, ExecuTrain</p>
TECHNOLOGY	KEY PLAYERS
<p>Technology vendors provide creation and capture tools, enterprise systems, and learning-specific hardware enabling the creation, deployment, delivery, and management of technology-based training.</p> <p>Within these three technology segments, the education technology market includes companies offering one or more of the following products: authoring and Web publishing tools, capture and edit tools, training management and administration systems, ERP systems, knowledge management systems, performance support systems, collaborative software &amp; virtual classroom technology, distribution hardware, interaction hardware, audio/video streaming and conferencing technology, testing and assessment tools, simulation tools, and other enabling technologies.</p>	<p><b>Learning Management Systems &amp; Authoring Tools:</b> Saba Software, Docent, Click2learn.com, WBT Systems, Lotus Development Corporation, Teamscape, Pinnacle Multimedia, LearningByte International, Macromedia, EduNeering</p> <p><b>Virtual Classrooms &amp; Conferencing Technology:</b> InterWise, Centra Software, LearnLinc Corporation, One Touch Systems, PlaceWare</p>
SERVICES	KEY PLAYERS
<p>Service providers offer a variety of learning-related services, which we have categorized in three groups: portals, learning service providers (LSPs), and other professional services.</p> <p><b>Portals</b> provide consolidated access to learning and training from multiple sources by aggregating, hosting, and distributing content. A number of portals operate online communities, either as stand-alone learning communities or in combination with course offerings. Certain content providers and tool companies have launched portals in addition to their original core business. Most of the distributors and communities target other market segments, such as the post-secondary and continuing education markets, as well.</p> <p><b>LSPs</b>, a specialized type of ASP, offer learning and content management services, training delivery software, and/or other enabling technologies and services on a hosted/rental basis via diverse business models. Categories of LSPs also include providers offering assessment and testing services, certification and degree granting, online tutoring and mentoring, Internet-based collaboration services, and media production and delivery services.</p> <p><b>Other professional services</b> include contract content developers, consultants, Web integrators and hosts, and network and IT service providers.</p>	<p><b>Portals &amp; Communities:</b> Click2learn.com, Headlight.com, TrainingNet, KnowledgePlanet.com, Learn2.com, eMind.com, SmartPlanet.com, HungryMinds.com, Pro2Net, University.com</p> <p><b>LSPs:</b> Eduprise.com, KnowledgePlanet.com, Infonautics, Knowledge Navigators, MindLever.com</p> <p><b>Certification &amp; Testing Services:</b> CyberStateU.com, ProsoftTraining.com, HyCurve, Brainbench, MeasureUp, Virtual University Enterprise</p> <p><b>Other Services:</b> RWD Technologies, LearningByte International, Eloquent</p>

<sup>27</sup> Source: From “Corporate e-learning: Exploring a new frontier,” by Bachman, K., 2000, *Internet Time Blog*, Exhibit 13 “E-Learning Market Segments,” p.19. Ninth House Network and WR Hambrecht+ Co. Retrieved from <http://www.internetttime.com/Learning/articles/hambrech.pdf>

## Appendix G. Corporate E-Learning Universe<sup>28</sup>



<sup>28</sup> Source: From "Corporate e-learning: Exploring a new frontier," by Bachman, K., 2000, *Internet Time Blog*, Exhibit 15 "Corporate E-Learning Universe," p. 21. Ninth House Network and WR Hambrecht+ Co. Retrieved from <http://www.internettime.com/Learning/articles/hambrecht.pdf>

## Appendix H. The Top 100 Tools for Learning 2015<sup>29</sup>

### A- Content Tools

#### A.1 Presentation Tools

<i>Name</i>	<i>R<sub>30</sub></i>	<i>Cost</i>	<i>Available</i>	<i>Website</i>	<i>Categories</i>
Google Slides	4	Free	Hosted	<a href="http://www.google.com/docs">www.google.com/docs</a>	Documentation, PDF, presentation, spreadsheets, forms/polls/surveys, codesign, file sharing
PowerPoint	5	Commercial. Free Trial	Download	<a href="http://www.microsoft.com/powerpoint">www.microsoft.com/powerpoint</a>	Presentations
Prezi	11	Free & Premium Plans	Hosted	<a href="https://prezi.com">https://prezi.com</a>	Presentations
Slideshare	20	Free	Hosted	<a href="http://slideshare.net">http://slideshare.net</a>	Documentation, presentation, graphics/infographics
Keynote	55	Commercial	Download	<a href="http://www.apple.com/mac/keynote">http://www.apple.com/mac/keynote</a>	Presentation software for all Mac and iOS platforms. Can be easily controlled using an iPhone, iPad or Apple watch
Haiky Deck	92	Public (free) & EDU, Pro & Volume plans	Hosted	<a href="https://haikudeck.com">https://haikudeck.com</a>	Presentation Software

#### A.2 Animation Tools

PowToon	19	Free & Premium Plans	Hosted	<a href="http://www.powtoon.com">www.powtoon.com</a>	Course authoring, video
Explain Everything	47	Free	Download	<a href="http://www.explaineverything.com">www.explaineverything.com</a>	Interactive whiteboard and screencasting app that allows annotate, animate, narrate, import, and export content
VideoScribe	48	Commercial, Free trial	Download	<a href="http://www.videoscribe.co">www.videoscribe.co</a>	Course authoring, video animation. Allows creation of own whiteboard-style animations with no design or technical know-how
Office Mix	51	Free	Download	<a href="https://mix.office.com">https://mix.office.com</a>	From Microsoft, a free PowerPoint app to create interactive videos
GoAnimate	63	Commercial, Free trial	Download	<a href="https://goanimate.com">https://goanimate.com</a>	Course authoring, video/animation easy-to-use tool to create professional animated videos

#### A.3 Video Hosting and Editing Tools

YouTube	2	Free	Hosted	<a href="https://www.youtube.com">https://www.youtube.com</a>	Video/animation, sharing own video content
TED Talks & TED Ed	35	Free	Hosted	<a href="http://www.ted.com">www.ted.com</a> ; <a href="http://ed.ted.com">ed.ted.com</a>	Course authoring, video/animation.
Office Mix	51	Free	Download	<a href="https://mix.office.com">https://mix.office.com</a>	Free PowerPoint app to create interactive videos
Vimeo	71	Free and Premium	Hosted	<a href="https://vimeo.com">https://vimeo.com</a>	Video/animations. Users can upload, view and share videos

<sup>29</sup> Source: Adapted from “Best of Breed Tools 2015,” by Hart, J., *Centre for Learning & Performance Technologies*, Retrieved from <http://c4lpt.co.uk/directory/top-100-tools/best-of-breed-tools-2015/>

<sup>30</sup> Rating on the “Top 100 Tools for Learning 2015,” by Hart, J., *Centre for Learning & Performance Technologies*, Retrieved from <http://c4lpt.co.uk/directory/top-100-tools/>

iMovie	76	Free	Download (for Macs)	<a href="http://www.apple.com/mac/imovie">http://www.apple.com/mac/imovie</a>	Video/Animation. Makes viewing and working with video as easy as working with photos. A built-in library automatically organizes all clips captured and movies created
MovieMaker	78	Free and Premium versions	Hosted	<a href="http://windows.microsoft.com/">http://windows.microsoft.com/</a>	From Microsoft, allows to create, edit, and share movies on personal computer.
EDpuzzle	85	Free	Download	<a href="http://www.edpuzzle.com">www.edpuzzle.com</a>	Course authoring, video/animation. Allows to take any video off the web, edit it, add notes and questions, and create virtual classrooms where the learner's work can be monitored

#### A.4 Screencasting and Screenshot Tools

Snagit	24	Commercial, Free trial	Download	<a href="https://www.techsmith.com/snagit.html">https://www.techsmith.com/snagit.html</a>	Screen capture, screencasting. Allows to grab an image or video on a computer screen and add enhancing text and other effects
Screencast-o-matic	27	Free	Download	<a href="http://www.screencastomatic.com">www.screencastomatic.com</a>	Makes screen casting free and easy with one-click screen capture, online or the app can be downloaded and installed on Mac
Camtasia	31	Commercial, Free trial	Download	<a href="https://techsmith.com/camtasia.html">https://techsmith.com/camtasia.html</a>	Course authoring, screencasting tool to record, edit and enhance on-screen activity
Adobe Captivate	38	Commercial, Free Trial	Download	<a href="https://www.articulate.com">https://www.articulate.com</a>	Course Authoring, Course Management tool that allows to rapidly create simulations, software demonstrations and scenario-based training
Jing	57	Free and Premium versions	Download	<a href="http://www.techsmith.com/jing.html">www.techsmith.com/jing.html</a>	Screencasting program that allows to capture anything on the computer screen as an image or short video and share it instantly

#### A.5 Graphic/Infographic Tools

Canva	81	Free and Premium plans	Hosted	<a href="https://www.canva.com">https://www.canva.com</a>	Simple graphic design tool
Piktochart	93	Free and Premium plans	Hosted	<a href="http://piktochart.com">http://piktochart.com</a>	Easy-to-use design app for producing infographics

#### A.6 Photo/Imaging Tools

Adobe Photoshop	58	Commercial, Free trial	Download	<a href="http://www.adobe.com">http://www.adobe.com</a>	Photo imaging tool for professional and amateur photographers, graphic and web designers
Instagram	73	Free	Hosted	<a href="http://www.instagram.com">www.instagram.com</a>	Allows taking pictures or video, choosing a filter to transform its look and feel, and then post it. Can be shared on Facebook, Twitter and other places
ThingLink	89	Free	Hosted	<a href="https://www.thinglink.com">https://www.thinglink.com</a>	Interactive Media Platform that empowers publishers & educators to create more engaging content by adding rich media links to photos and videos

#### A.7 Audio Tools

Audacity	25	Open Source	Download	<a href="http://sourceforge.net/projects/audacity/">http://sourceforge.net/projects/audacity/</a>	Free multi-track audio editor and recorder
----------	----	-------------	----------	---	--

## A.8 Documentation Tools

Google Docs	4	Free	Hosted	<a href="http://www.google.com/docs">www.google.com/docs</a>	Create and share docs, spreadsheets and presentations- individually or collaboratively. Build online forms for data collection
Word	30	Commercial. Free trial	Download	<a href="http://www.microsoft.com/word">www.microsoft.com/word</a>	Popular and versatile word processing tool for creating all kinds of paper-based materials
Adobe Acrobat DC	94	Commercial. Free trial	Download	<a href="http://www.adobe.com/products/acrobatpro">www.adobe.com/products/acrobatpro</a>	Create, combine, and control Adobe PDF documents for easy and secure distribution, collaboration and data collection
Wordle	96	Free	Hosted	<a href="http://www.wordle.net">http://www.wordle.net</a>	Toy for generating “word clouds” from text that you provide

## A.9 Spreadsheet Tools

Google Sheets	4	Free	Hosted	<a href="http://www.google.com/docs">www.google.com/docs</a>	Create and share docs, spreadsheets and presentations- individually or collaboratively. Build online forms for data collection
Excel	56	Commercial. Free trial	Download & Online	<a href="http://Office.microsoft.com/excel">Office.microsoft.com/excel</a>	Used for a variety of reasons- from a gradebook to a training management system

## B– Instructional Tools

### B.10 Course Authoring Tools

Adobe Captivate	38	Commercial. Free Trial	Download	<a href="https://www.articulate.com">https://www.articulate.com</a>	Course Authoring, Course Management that allows to rapidly create simulations, software demonstrations and scenario-based training
Articulate Storyline	26	Commercial. Free Trial	Download	<a href="https://www.articulate.com">https://www.articulate.com</a>	Empower rapid e-learning with a set of powerful authoring tools: eg e-Learning Studio and Storyline 2. Track e-Learning through Articulate Online
Camtasia	31	Commercial. Free Trial	Download	<a href="https://www.techsmith.com/camtasia.html">https://www.techsmith.com/camtasia.html</a>	Is a tool to record, edit and enhance on-screen activity in the form of screencasts
Easygenerator	90				
iSpring Suite	41	Commercial. Free Trial	Download	<a href="http://www.ispringsolutions.com">http://www.ispringsolutions.com</a>	e-Learning authoring software that integrates with PowerPoint to create e-Learning course and video lectures
Lectora Inspire	91	Commercial. Free Trial	Download	<a href="http://trivantis.com/products/inspire-e-learning-software">http://trivantis.com/products/inspire-e-learning-software</a>	Provides users with an authoring environment for creating and delivering interactive multimedia content
Office Mix	51	Free	Download PC only	<a href="https://mix.office.com">https://mix.office.com</a>	From Microsoft, a free PowerPoint app to create interactive videos
SoftChalk	98	Commercial. Free Trial	Download	<a href="http://softchalk.com">http://softchalk.com</a>	Create interactive web pages for the elearning course
Sway	70	Free	Download	<a href="https://sway.com">https://sway.com</a>	Tool to create web content. You can embed a variety of resources into Sway, e.g. images, audio, video, maps, animations, presentation of Office Mix, etc., and then share it online
Udutu	53	Free	Hosted	<a href="http://www.udutu.com">http://www.udutu.com</a>	Allows to build course quickly and easily online either on your own or collaboratively with others

### B.11. Course Management/ Course Networking Platforms

Blackboard Learn	95	Commercial	Installed	blackboard.com/platforms/learn.aspx	Course Management
Canvas	37	Commercial, Free Trial	Hosted/ Installed	<a href="https://www.instructure.com">https://www.instructure.com</a>	A new style course management system that is adaptable, customizable, easy to use and mobile
Edmodo	39	Free	Hosted	<a href="https://www.edmodo.com">https://www.edmodo.com</a>	Private social platform for teachers and learners to share ideas, files, events and assignments.
Moodle	15	Open Source	Download	<a href="https://moodle.org">https://moodle.org</a>	Course authoring, course management
Schoology	61	Free and Enterprise Versions	Hosted	<a href="https://schoology.com">https://schoology.com</a>	Course management system for institutions focused on collaboration that allows users to create, manage, and share academic content

### B.12 Quizzing, Survey and Data Collection Tools

Google Forms	4	Free	Hosted	<a href="http://www.google.com/docs">www.google.com/docs</a>	Documentation, PDF, presentation, spreadsheets, forms/polls/surveys, codesign, file sharing
Quizlet	69	Free and Premium Versions	Hosted	<a href="http://www.quizlet.com">www.quizlet.com</a>	Provides learning tools for students including flashcards, study and game modes
SurveyMonkey	64	Free and Premium Plans	Hosted	<a href="https://www.surveymonkey.com">https://www.surveymonkey.com</a>	Online survey tool that allows users to design surveys, collect responses, and analyze the responses of their created surveys. Users can also get access to their survey questions and professional templates

### B.13 MOOC platforms

Khan Academy	33			<a href="http://edx.org">http://edx.org</a>	Popular learning platform with an extensive library of courses to learn about math, science, economics, finance, computing and other topics
Coursera	44			<a href="http://www.coursera.org">www.coursera.org</a>	Education company that partners with top universities and other organizations to offer online courses for free
iTunesU	75			<a href="http://www.apple.com/itunes">www.apple.com/itunes</a>	Digital media player that lets the user to organize music, movies, TV shows on Mac or PC, then add to iPod
Udemy	87			<a href="http://www.udemy.com">www.udemy.com</a>	Unlike academic MOOC program provides platform for experts of any kind to create courses
edX	99			<a href="http://edx.org">http://edx.org</a>	Hosts online university-level courses in a wide range of disciplines including some at no charge

## C - SOCIAL TOOLS

### C.15 Webinar/Meeting Tools

Skype	9	Free and Premium Versions	Download	<a href="http://www.skype.com">http://www.skype.com</a>	One-to-one interaction and group conversations. Skype for Business (previously Lync) means it is also a key enterprise tool; and Skype in the Classroom a key educational tool
Google Hangouts	23	Free	Hosted	Hangouts.google.com	Google Video Hangouts are for small groups, whilst Hangouts on Air are live events for larger groups that are streamed via YouTube
Adobe	34	Commercial.	Hosted/	<a href="http://www.adobe.com/p">http://www.adobe.com/p</a>	Web conferencing software for web

Connect		Free Trial	Installed	<a href="https://products.adobeconnect.html">products/adobeconnect.html</a>	meetings, webinar events and virtual classroom experiences
WebEx	72	Free and Premium Plans	Hosted	<a href="http://www.webex.com">http://www.webex.com</a>	Web conferencing and meeting software that combines file and presentation sharing with voice, HD video and meeting spaces
Blackboard Collaborate	77	Commercial	Hosted	<a href="http://www.blackboard.com/online-collaborative-learning/index.aspx">http://www.blackboard.com/online-collaborative-learning/index.aspx</a>	Offers social, interactive learning experience with virtual classrooms, online conferencing and instant messaging. Previously known as Elluminate

### C.16 Live Event Interaction Tools

Kahoot	17	Free	Hosted	<a href="http://www.getkahoot.com">www.getkahoot.com</a>	Game-based classroom response system for schools, universities and businesses
Socrative	32	Free	Hosted	<a href="http://socrative.com">http://socrative.com</a>	Smart student response system that empowers teachers to engage their classroom through a series of educational exercises and games via smartphones, laptops and tablets
Nearpod	50	Free and Premium Plans	Hosted/Download	<a href="http://nearpod.com">http://nearpod.com</a>	Allows to present, quiz and report synchronously with students or else make content available on demand
Poll Everywhere	79	Free and Premium Plans	Hosted	<a href="https://www.polleverywhere.com/">https://www.polleverywhere.com/</a>	Easy way to gather live responses in any venue: conferences, presentations, classroom, etc- using SMS, web, or Twitter
Today'sMeet	88	Free	Hosted	<a href="https://today'smeet.com">https://today'smeet.com</a>	Allows to set up a backchannel for an event. It gives a private chat room where the user and the audience can have a conversation together
Mentimeter	97	Free and Premium Plans	Hosted	<a href="http://www.mentimeter.com">www.mentimeter.com</a>	Cloud-based tool that allows to engage and interact with audience in real time

### C.17 Collaboration and Team Tools

Google Docs/Drive	4	Free	Hosted	<a href="http://www.google.com/docs">www.google.com/docs</a>	Documentation, PDF, presentation, spreadsheets, forms/polls/surveys, codesign, file sharing
Padlet	29	Free	Hosted	<a href="https://padlet.com">https://padlet.com</a>	Previously known as Wallwisher, is an online noticeboard, which means it can be used for making announcements, keeping notes and online brainstorming
Trello	82	Commercial. Free Trial	Hosted	<a href="https://trello.com">https://trello.com</a>	Fast and easy way to organize day-to-day work to a personal project. Available for both personal and collaborative use
Slack	83	Free and Premium Plans	Hosted	<a href="http://slack.com">http://slack.com</a>	Team collaboration tool for real time messaging and file sharing

### C.18 File Sharing Platforms

Google Drive	4	Free	Hosted	<a href="http://www.google.com/docs">www.google.com/docs</a>	Documentation, PDF, presentation, spreadsheets, forms/polls/surveys, codesign, file sharing
Dropbox	6	Free	Hosted	<a href="https://www.google.com">https://www.google.com</a>	Important tool for sharing files both publically and privately, both in companies and education

### C. 19 Blogging and website tools

WordPress	8	Open Source	Hosted or Download	<a href="http://www.wordpress.com">www.wordpress.com</a>	Used by the individuals and organizations for blogging, but also to create fully-functioning web-sites due to the powerful range of 3 <sup>rd</sup> party plugins
Blogger	18	Free	Hosted	<a href="https://www.blogger.com">https://www.blogger.com</a>	Easy way to start and maintain a blog
Google Sites	68	Free	Hosted	<a href="http://Sites.google.com">Sites.google.com</a>	Allows to create simple, secure group websites. Share information with a few people, a whole organization or the entire world

### C.20 Public Social Networks

Twitter	1	Free	Hosted	<a href="https://twitter.com">https://twitter.com</a>	Useful for professional networking, for news and updates as well as backchannel in conferences and for real-time chats using hashtags
Facebook	7	Free	Online	<a href="http://www.facebook.com">www.facebook.com</a>	Although primarily used by individuals for personal networking, it is also seen as a useful tool within education to support both study groups and course sites
LinkedIn	14	Free and Premium Plans	Hosted	<a href="https://www.linkedin.com">https://www.linkedin.com</a>	Prime professional networking service, for connecting with other professionals as well as for finding jobs. Its range of groups is also considered valuable
Google+	40	Free	Hosted	<a href="https://plus.google.com">https://plus.google.com</a>	Google's social networking site is useful for deep conversations, resource sharing and for creating communities around topics and events

### C. 21 Enterprise Social Platforms

Yammer	28	Free to set up; commercial to obtain admin rights	Hosted	<a href="http://www.yammer.com">www.yammer.com</a>	Popular social collaboration and knowledge sharing platform both in businesses and education
SharePoint	45	Commercial. Free trial	Hosted	<a href="http://www.sharepoint.com">www.sharepoint.com</a>	Integrated suite of products from Microsoft to create a social intranet and collaboration portal
Google Apps	59	Commercial	Hosted	<a href="https://www.google.com/work/apps/business/">https://www.google.com/work/apps/business/</a>	(for Work, Government and Education) is a service from Google providing independently customizable versions of several Google products under a custom domain name

## D - PERSONAL TOOLS

### D. 22 Search and Research Tools

Google Search	3	Free	Hosted	<a href="https://google.com">https://google.com</a>	Powerful and popular search engine. Often described as the only e-learning tool you will ever need
Wikipedia	12	Free	Hosted	<a href="https://www.wikipedia.org">https://www.wikipedia.org</a>	Resource for quickly finding out about the topic, and then for delving into primary resources for deeper information
Google Scholar	43	Free	Hosted	<a href="https://scholar.google.com">https://scholar.google.com</a>	Provides a simple way to search broadly for scholarly literature

### D.23 Email Clients

Gmail	52	Free	Hosted	<a href="http://Gmail.com">Gmail.com</a>	Free web-based email service from Google
-------	----	------	--------	--	--

Outlook	62	Commercial. Free Trial	Download	<a href="http://Outlook.com">Outlook.com</a>	Email client within the Microsoft Office suite
---------	----	---------------------------	----------	--	--

#### D.24 Messaging Tools

Skype	9	Free and Premium Versions	Download	<a href="http://www.skype.com">http://www.skype.com</a>	Useful for one-to-one interactions as well as group conversations. Skype for Business (previously Lync) means it is also a key enterprise tool; and Skype in the Classroom a key educational tool
WhatsApp	21	Free and Premium Versions	Download (and Hosted)	<a href="https://www.whatsapp.com">https://www.whatsapp.com</a>	Not just a personal messaging app, but its broadcasting and group functionalities make it a valuable tool both for educational and corporate activities

#### D.25 Social Bookmarking and Curation Tools

Pinterest	13	Free	Hosted	<a href="https://www.pinterest.com">https://www.pinterest.com</a>	Visual bookmarking site; has proved very popular as a way of pinning images together with links to resources
Diigo	42	Free and Premium Versions	Hosted	<a href="https://www.diigo.com">https://www.diigo.com</a>	Social bookmarking, research and knowledge sharing tool. Allows making personal tools and highlight text on web pages and share them with others
Scoopit	60	Free and Premium Plans	Hosted	<a href="http://www.scoop.it">http://www.scoop.it</a>	Social media publishing platform where users curate content on their favorite topics and share it as a visual magazine
Flipboard	86	Commercial. Free trial	Download	<a href="http://www.flipboard.com">www.flipboard.com</a>	Social magazine, available for iPad, iPhone and Android devices, that curates content from the user's own feeds and other places
Delicious	100	Free	Hosted	<a href="http://delicious.com">http://delicious.com</a>	Free tool to discover, save, organize and share interesting links on the web

#### D.26 Note-Taking Tools

Evernote	10	Free and Premium Versions	Download	<a href="https://evernote.com">https://evernote.com</a>	The learning note-taking tool—not just for textual notes but also for web clipping. It can also be used across mobile computing devices. Notebooks are also shareable
OneNote	46	Free	Download	<a href="http://www.onenote.com">http://www.onenote.com</a>	Note-taking software for capturing ideas and to-dos on the go
Notability	67	Small charge	Download	<a href="http://www.gingerlabs.com">http://www.gingerlabs.com</a>	Note-taking app for mobil devices and desktop. Supports text, images and audio recordings, contains a sketchpad that allows to draw images as well as mark up images, web clips and clip art

#### D.27 Web Browsers

Google Chrome	22	Free	Download	<a href="http://www.google.com/chrome">www.google.com/chrome</a>	Can be used across multiple platforms, with many plug-ins
Firefox	74	Open Source	Download	<a href="http://www.mozilla.com/firefox">www.mozilla.com/firefox</a>	Open source browser with many add-ons

#### D.28 Personal Readers, Players, and Dashboards

Feedly	36	Free and Premium Versions	Hosted	<a href="https://feedly.com">https://feedly.com</a>	RSS reader that allows to organize, read, and share the content of the favorite sites
Kindle & Reader	65	Commercial device. Free app	Download	<a href="http://www.amazon.com/kindle">www.amazon.com/kindle</a>	Is a series of e-reader devices

iTunes	75	Free	Download	<a href="http://www.apple.com/itunes">www.apple.com/itunes</a>	Digital media player that allows to organize music, movies, TV shows, and more on Mac or PC, then add to iPod, iPhone or iPad. iTunesU is a section of Apple's iTunes Music. Offers free educational audio and video from universities and other organizations to download
Tweetdeck	80	Free	Download	<a href="https://tweetdeck.twitter.com">https://tweetdeck.twitter.com</a>	Personal social media dashboard for staying in touch with what's happening and connecting with contacts on Twitter. Available for Web and smartphones

### D.29 Other Personal Productivity Tools

Pocket	49	Free	Hosted/Download	<a href="https://getpocket.com">https://getpocket.com</a>	Allows to save pages on the computer or smartphone; so the user can read them later, even without internet connection. Previously known as ReadItLater
Google Translate	54	Free	Hosted	<a href="https://translate.google.com">https://translate.google.com</a>	Free online service for instantly translating text and web pages
Google Maps	56	Free	Hosted	<a href="https://www.google.com/maps">https://www.google.com/maps</a>	Searchable and zoomable maps
IFTTT	84	Free	Hosted	<a href="https://ifttt.com">https://ifttt.com</a>	Allows to create powerful connections between social channels

### D. 30 Devices and Apps

iPad & Apps	18	Commercial device. Free & commerc apps	Download	<a href="http://www.apple.com/ipad">www.apple.com/ipad</a>	Huge range of apps available
Kindle & Reader	65	Commercial device. Free app	Download	<a href="http://www.amazon.com/kindle">www.amazon.com/kindle</a>	Is a series of e-reader devices

## Appendix I. What Features Do I Need?<sup>31</sup>

	NARRATED POWERPOINT	ENHANCED POWERPOINT					POWERPOINT NOT REQUIRED
		Desktop Solutions: PowerPoint Add-ins			Cloud-based solutions		
		Adobe Presenter 9	SoftChalk (non-narrated)	iSpring Presenter	Brainshark	Voicethread	
I want recorded narration	<input checked="" type="checkbox"/> by mic	<input checked="" type="checkbox"/> by mic	<input checked="" type="checkbox"/> by mic	<input checked="" type="checkbox"/> by mic	<input checked="" type="checkbox"/> by mic, phone, mp3 upload	<input checked="" type="checkbox"/> by mic	No recording feature, can embed audio
I want to be able to edit the narration or re-record a single slide	only can re-record	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NA
I want a non-narrated presentation	-	Good choice	Good choice	Good choice	-	-	Good choice
I want to embed video	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
I want to show Slide Text Notes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> comments	No slides, presentation is text
<b>Interactive features</b>							
Navigation Menu so users are in control of where to go	no	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Limited (slider)	<input checked="" type="checkbox"/>
Hyperlinks will work within the presentation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Added attachments	no	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Learner self-assessment (non-graded quizzes) or evaluation surveys	no	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Quizmaker, part of Studio 13, or purchased separately to use with AP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	no	<input checked="" type="checkbox"/>
Viewers can add comments (social media aspects)	no	no	<input checked="" type="checkbox"/> Cloud version only	no	<input checked="" type="checkbox"/> Text-only option	<input checked="" type="checkbox"/> Text or Audio options	no

	LECTURE CAPTURE			
	Personal solutions		Enterprise solutions	
	Techsmith Camtasia Studio (v8 or Mac v2)	Adobe Captivate 7	Tegrity	Recorded Lync
I want recorded narration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> by mic	<input checked="" type="checkbox"/> by mic
I want to be able to edit the narration or re-record a single slide	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	no	no
I want a non-narrated presentation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	-
I want to embed video	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
I want to show Slide Text Notes	no	<input checked="" type="checkbox"/>	no	no
<b>Interactive features</b>				
Navigation Menu so users are in control of where to go	no	<input checked="" type="checkbox"/>	Limited (slider)	no
Hyperlinks will work within the presentation	<input checked="" type="checkbox"/> With hotspots	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> projected in a sidebar	no
Added attachments	no	<input checked="" type="checkbox"/>	no	no
Learner self-assessment (non-graded quizzes) or evaluation surveys	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	no	no
Viewers can add comments (social media aspects)	no	<input checked="" type="checkbox"/>	no	No

<sup>31</sup> Source: from "Software for Creating E-Learning Materials," by Niebuhr, V., Niebuhr, B., Urbani, M.J. & Trumble, J. (2014). Table 1, p. 11. Retrieved from [http://www.utmb.edu/pediedtech/pdf/Software\\_for\\_Creating\\_Online\\_Materials.pdf](http://www.utmb.edu/pediedtech/pdf/Software_for_Creating_Online_Materials.pdf)

Appendix J. Cost? Do I Have Resources to Purchase or Do I Need a Free Product?<sup>32</sup>

	NARRATED POWERPOINT	ENHANCED POWERPOINT				
		Desktop Solutions: PowerPoint Add-ins			Cloud-based solutions	
		Adobe Presenter 9	Articulate Presenter	iSpring Presenter	Brainshark	Voicethread
	Feature within PowerPoint 2007,2010,2013	\$499	AP-alone \$799 Studio 13 \$1398	\$697	Requires monthly subscription	UTMB licenses
<i>Check for institutional educational discounts and volume discounts</i> UTMB Bookstore discount	NA	\$220	AP \$537.70 Studio 13 \$999	\$675.90	--	--

	POWERPOINT NOT REQUIRED	LECTURE CAPTURE			
		Personal solutions		Enterprise solutions	
		SoftChalk	Techsmith Camtasia Studio v8 or Camtasia Mac V2	Adobe Captivate	Tegrity
	UTMB licenses	Studio 8 PC \$299 Camtasia Mac V2 \$99	\$869	UTMB licenses	UTMB licenses
<i>Check for institutional educational discounts and volume discounts</i> UTMB Bookstore discount		Studio 8 PC \$235 Camtasia Mac V2 \$91.50	\$683	---	---

<sup>32</sup> Source: from "Software for Creating E-Learning Materials," by Niebuhr, V., Niebuhr, B., Urbani, M.J. & Trumble, J. (2014). Table 2, p. 11. Retrieved from [http://www.utmb.edu/pediedtech/pdf/Software\\_for\\_Creating\\_Online\\_Materials.pdf](http://www.utmb.edu/pediedtech/pdf/Software_for_Creating_Online_Materials.pdf)

## Appendix K. Open Source Learning Management Systems<sup>33</sup>

1. [.LRN's LMS](#) by .LRN  
.LRN's LMS is a customizable learning portal that can be customized to fit the needs of the individual learner. Whether you are a corporation or a smaller education community, .LRN's LMS can be scaled to meet your learning needs.
2. [ATutor's LMS](#) by ATutor  
ATutor is an OpenSource LMS. Users have created add-ons to ATutor LMS such as AContent, a content management system and ATutor Social, a networking component.
3. [BusinessLMS](#) by LMS Global  
A full-featured Open Source LMS for businesses. Claims to be SCORM 1.2 con-formant.
4. [Canvas CV](#) by Instructure Inc.  
An open source LMS that is free for instructors.
5. [Caucus](#) by Caucus  
Caucus is an Open-Source eLearning platform that focuses on learner interaction and conversation to motivate learning. Caucus combines the traditional functions of a LMS, reporting, tracking and delivery functions, and keeps the learner engaged by adding the element of constant conversations between peers.
6. [Chamilo's LMS](#) by Chamilo Association  
Chamilo is a open-source LMS that has features that allow users to easily create content. Chamilo allows offers tools that allow for all different learning styles.
7. [eFront](#) by Epignosis A SCORM 2004 4th ed. LMS.  
Open Source with the ability to pay for increased functionality.
8. [Ganesha LMS](#) by Anema  
A French, open-source LMS that supports AICC, SCORM 1.2 and SCORM 2004.
9. [ILIAS](#) by ILIAS  
ILIAS is an Open-Source LMS that allows users to create, manage and track learning delivered. Claims to support SCORM 1.2, SCORM 2004 and AICC standards.
10. [LatitudeLearning](#) by Latitude Consulting Group (Latitude CG)  
A full-featured LMS with pricing options from free to paid. Latitude's suite of products provides an easily accessible content library. The LMS claims to be SCORM conformant.

---

<sup>33</sup> Source: from "The Ultimate list of Open Source Learning Management Systems," by Pappas, C., July 29, 2012. *eLearning Industry*. Retrieved from <http://elearningindustry.com/open-source-learning-management-systems>

11. [Metastudy](#) by Metacoon  
Metastudy is an Open-Source LMS that provides users with tools to produce, deliver and track their learning. Metastudy can be integrated with other Metacoon products, such as MetaAlumni to establish networks.
12. [Moodle](#) by Moodle Pty Ltd  
Open source LMS with a full kit of features. Supports SCORM 1.2 and AICC, but 3rd party add-ons can expand the interoperability standards and features for Moodle.
13. [OLAT LMS](#) by OLAT (Online Learning and Training)  
A popular Open Source LMS that supports SCORM 1.2, IMS LTI/QTI.
14. rSmart Sakai CLE by rSmart  
rSmart takes the elegance of Sakai up a notch by adding additional enhancements and elements to the core CLE. Many of these enhancements are even shared back with the Sakai community at large. Notable features of the rSmart Sakai CLE include hosted web conferencing, integrated SCORM support via SCORM Cloud, improved internationalization options and greater security.
15. [Sakai CLE](#) by The Sakai Foundation  
A full-featured learning environment. Supports SCORM 1.2/2004 through the use of add-on features.
16. Sakai OAE by The Sakai Foundation  
A full-featured LMS designed for academic institutions. Supports SCORM 1.2/2004 through add-on features.
17. [Totara LMS](#) by Totara Learning Solutions  
A corporate distribution of Moodle. Claims support for SCORM 1.2 and AICC.

## Appendix L. Cloud Based e-Learning Authoring Tools<sup>34</sup>

1. [easygenerator](#) by EasyGenerator  
Easygenerator provides cloud-based eLearning authoring software. Easygenerator enables instructional designers and subject matter experts to rapidly create the most engaging courses that have the highest learning impact. Easygenerator is affordable, easy to use, and future proof. Simply create, design and publish your eLearning courses. Used and loved by 5000+ users in more than 120 countries in both enterprises and universities. Easygenerator's headquarter is located in Rotterdam, The Netherlands.
2. [Lectora Online](#) by Trivantis  
Simple, Seamless Cloud-Based e-Learning. Easily create your e-Learning online using Lectora Online's web-based, collaborative authoring tools.
3. [Elucidat](#)  
Elucidat has proven to speed up the e-learning production process, authoring highly engaging HTML5 e-learning for ANY device. Delight learners with infinite control over 'look and feel' and the ability to create your own interactions.
4. [ZebraZapps](#) by Allen Interactions  
ZebraZapps is a revolutionary cloud-based authoring and publishing platform created by Allen Interactions. ZebraZapps allows developers and non-programmers alike to create rich, interactive applications easily and quickly, as well as share, publish, and sell objects or entire applications.
5. [QuickLessons](#) by QuickLessons  
The collaborative platform to create e-Learning courses. Create online courses using our libraries of templates, animated characters, interactive games and adding your content including PowerPoint Presentations.
6. [Amvonet Publish](#) by Amvonet  
Create, edit, and publish interactive lessons, "text books" and learning modules using an intuitive graphical user interface.
7. [SmartBuilder](#) by Vantage Path  
SmartBuilder is a cloud-based application that is designed with team participation in mind. Effective collaboration between team members or outside talent improves production timelines and course quality.

---

<sup>34</sup> Source: from "Free Authoring Tools for eLearning," by Pappas, C., July 22, 2012. *eLearning Industry*. Retrieved from <http://elearningindustry.com/free-authoring-tools-for-elearning>

8. [Liquid Authoring](#) by Landmark eLearning  
A rapid authoring tool with SCORM compatibility, has a cloud-based media library and is TOTALLY HTML 5 compliant.
9. [Artisan](#) by Bankers Edge  
Students are more engaged, motivated learners when met with a clean, visually appealing training environment. Building on this principle, Artisan Internet-based content management transforms the task of training course creation into a canvas limited only by your imagination. Incredibly powerful yet remarkably easy to use, with its palette of innovative features, Artisan enables you to change fonts, apply new color schemes and import learning objects in minutes.
10. [Atlantic Link](#) by Assima  
Assima Atlantic Link (AAL) enables Flash based interactive eLearning lessons to be created rapidly using a trio of components called Content Point, Capture Point and Knowledge Point.
11. [CA/MS](#) by Evolve Learning  
The CA/MS is a browser-based tool for creating, managing and delivering high-quality learning content quickly and cost-effectively across your organization. Organizations just starting out in e-learning will appreciate its simplicity, while experienced developers will find that CA/MS offers ways to streamline their course creation process—and substantially reduce development costs.
12. [Cameo](#) by Yukon Group  
Cameo is a web-based tool that delivers scenario-based learning reinforcement via email. Cameo focuses on the forgotten phase of learning... Follow-up. Research shows that what happens after training is often more important than what happens during training. With Cameo, you can continually reinforce the key learning points from any training event... and it only takes your Learner's a minute each week.
13. [CAT](#) by Bankers Edge  
Getting up to speed on different types of custom authoring software is often a production roadblock for instructional designers. Frequently, they have to navigate through tutorials on features irrelevant to their course-design goals, just to learn how to use the functionality they need. With the BankersEdge Course Authoring Tool (CAT), instructional designers across all levels of experience are productive immediately.
14. [CATS](#) by Intuto  
The Intuto Content Authoring Tools (CATS) is a web-based authoring system that gives users the ability to create online courses rapidly. This is done by compiling text and multimedia resources into structured and reusable learning objects and courses.
15. [Claro](#) by dominKnow  
While being a fully HTML5 compliant elearning authoring tool since inception was certainly a revelation to the industry, what makes Claro truly unique is our ability to rapidly introduce new features and respond to customer feedback in no-time-flat. Because Claro is cloud-

based, users always have the best, most up-to-date content authoring platform at their fingertips.

16. [ClickClass](#) by Lightmedia Solutions

ClickClass is a rapid e-learning authoring tool. It is designed to enable users to rapidly author, deliver and manage their own online learning content. It can be set up in minutes and is FREE to use during the e-learning authoring stage. You only pay for ClickClass once you have more than 2 active users utilising the e-learning software.

17. [Cobent CoAuthor](#) by Cobent

Cobent's web-based collaborative e-learning authoring tool CoAuthor enables instructional designers and course developers to rapidly assemble, author and publish engaging and interactive e-learning content - without the need for programming or design skills. A web-based authoring environment allows individuals or teams to collaboratively create, manage and control projects and versions from multiple locations. The comprehensive library of assets, templates, themes and interactive elements makes it easy to rapidly create professional-looking content.

18. [Composica](#) by Composica

Composica is a social e-learning authoring system that offers real-time collaboration among team members and provides a powerful programming- free WYSIWYG environment to create and deliver high-quality interactive e-learning 2.0 content with embedded social media.

19. [EasyProf](#) by EasyProf

The intuitive interface of EasyProf allows you to create presentations, combining multimedia content like video, audio, animation, etc. with tests and interactions. You do not need any programming skills to do all this with EasyProf.

20. [Flypaper](#) by Flypaper Studios

With Flypaper you can create courses at one-sixth the time and expense. And without the limitations of rapid development tools!

21. [LearnerCap 5](#) by MaxItLearner

Web CAP 5 is an advanced web-based e-learning authoring system offering high flexibility and an abundance of features to collaboratively create and deliver quality e-learning content.

22. [scateignite 4 Professional](#) by scateignite

With Scate Ignite 4 Professional Edition you can create and share structured eLearning courses, quizzes, surveys, tutorials, demonstrations, corporate training, HD web videos, digital slide shows, web cam recordings, sales and marketing presentations, video/news blogs (vlogs) and podcasts.

23. Luminosity Studio by CM-Group

Rapid Authoring for eLearning. Create, publish and maintain your own eLearning courses quickly and easily.

24. [Uperform Professional](#) by Ancileu  
Perform is an authoring and content management tool that delivers targeted, high-quality learning content to employees. It allows authors with no programming experience to create, edit, and publish procedures, task-based simulations, and eLearning courses, and then quickly deploy the content to the entire workforce via the web.
25. [QuickPresentation](#) by Arlex Software  
With QuickPresentation you can build, play, share and export presentation on your iPhone or iPod Touch device. QuickPresentation is the perfect tool to create presentations on the go. Afterwards you can publish the presentation to your ftp server, email it to your friends or include it into your personal website. You can share or show selected presentations using built-in HTTP server.
26. [SHiFT Learning](#) by Aura Interactive  
SHiFT changes the model of traditional eLearning development, providing a solution to all those who think that eLearning is too expensive or complex to develop. It allows you to build powerful and interactive courses quickly and easily while offering outstanding savings in cost and time to market.
27. [myBrainshark](#) by Brainshark  
Brainshark provides the leading cloud-based software for creating, sharing and tracking online and mobile video presentations. With Brainshark, you can easily transform static content, such as PowerPoint documents, into voice-enriched video presentations that can be accessed anytime, on-demand.
28. [Rapid Intake Authoring Suite](#) by Callidus Cloud  
Rapid Intake's rapid authoring toolset provides a more robust and affordable solution than traditional learning software can. With extensive, directly integrated e-learning and mobile learning technologies, Rapid Intake will help improve training results by providing everything your development team needs and making it accessible in the cloud, from any computer with an internet connection.
29. [Zembl](#) by Can Studios  
Zembl has a wide range of features to put you in control of the content you produce. Administer teams easily, collaboratively develop using rich media content, popular question types and dynamic templating while handling bug requests all from within your browser. When it is time to publish your online learning, be confident that our universal export will deliver the content how you want it.
30. [CourseAvenue Studio](#) by CourseAvenue  
CourseAvenue Studio is a unique e-Learning authoring platform for developing online training. Studio was built with both beginners and experts in mind. Basic courses can be built from start to finish by beginner developers; while expert developers appreciate the full array of options available for building advanced e-Learning courses. Studio is hosted online using our secure servers, providing 24/7 access. Using a web browser, your team can develop courses anytime from anywhere.

31. [eNet Author](#) by eCom Scotlande  
NetAuthor is a fantastic web-based rapid authoring tool allowing you to write your own, high quality, eLearning in record time!
32. Podium by echoEleven  
Free your eLearning from the formulaic linear flow imposed by most rapid authoring systems. Podium is a powerful authoring system with an intuitive graphical interface that easily supports sophisticated, conditional branching structures. Additionally, Podium's built-in object model provides flexible and interactive content capabilities that lets the author create multiple deliverables from a single set of content components based on conditions set within the learning experience.
33. [eLearning maker](#) by e-doceo  
elearning maker was designed to facilitate and accelerate the creation of your training materials, as well as updates to them. Once your materials have been created, you choose the delivery mode that you prefer and the software generates the files in Flash format.
34. [CourseBuilder](#) by Edvantage Group  
Lumesse CourseBuilder is a collaborative, cloud-based e-learning authoring solution that empowers your team to easily deliver compelling and engaging learning content, suitable for desktops and mobile devices.
35. GoMo Authoring Tool by Epic  
GoMo Learning is Epic's multi-device e-learning and mobile learning authoring tool. It delivers the same content to multiple platforms, optimising it to each kind of device. Publish mobile learning apps to Apple, Android and BlackBerry devices, and create multi-device e-learning for desktops, smartphones and tablets. GoMo comes with a range of different assets, so you'll have all you need to create your own engaging e-learning and mobile learning apps in-house.
36. e-Learning Course Authoring Tool by Flex Authoring  
Template-based Authoring Build your own interactive training using a visual layout and flexible course templates. Create and manage your e-Learning rapidly, with or without your own in-house server. Utilize your existing content such as PowerPoint, PDF, Flash, video, images or just your own ideas.
37. [Go! Animate](#) by Go! Animate  
Make Amazing Animated Videos! Use our Video Maker to create videos for free. Make a viral video. Create an animated lesson for your class. Make an explainer video for your product, a demo video for your business, or a training video for your staff. GoAnimate is the fastest, easiest way to make a video!
38. [Course Builder](#) by Google  
Course Builder contains software and instructions for presenting your course material, which can include lessons, student activities, and assessments. It also contains instructions for using other Google products to create a course community and to evaluate the effectiveness of your course.

To use Course Builder, you should have some technical skills at the level of a web master. In particular, you should have some familiarity with HTML and JavaScript.

39. **Team Author** by Healthstream

Team Author allows subject matter experts and educators to collaboratively create e-learning courses that use the Sharable Content Object Reference Model (SCORM). Team Author is a cloud-based course authoring tool designed for creating, modifying, copying, exporting, and sharing engaging online courses. Team Author's intuitive web interface allows busy professionals to create courses together in real-time from any Web-connected location.

40. [Skillcast](#) by Inmarkets

With Skillcast Author you can edit Inmarkets e-learning modules and create your own library of interactive content. It is accessed online via a web browser.

41. **Knoodle** by Knoodle

Take your online presentations up a level...or three. Turn your tired looking slides into attention-grabbing media-rich presentations by easily combining slides, video, audio and images from your desktop, Google Docs and YouTube. Then, share them with the world or to a specific audience via multiple publishing options including a private URL or export them back to YouTube. You can even track and see if your presentations are being viewed.

42. [Expert Author 3.0](#) by Knowledge Quest

Using Expert Author's sophisticated capture features and component editors, you can quickly create interactive displays that contain live menus and toolbars, edit fields, areas with active rollover, buttons, list boxes, combo boxes, dialog boxes, and much more. You can import a script/storyboard written in Word, and then use the Timeline to create the interactive learning experience.

43. **Course Builder** by Learning Nexus

The Learning Nexus Course Builder is a fundamental element of our **cloud based** Nimbus system. It offers an efficient, simple and dynamic way to collaboratively create any tailored e-learning courses to meet your needs, or modify many of our catalogue courses to make them more unique to you. Over and above this, Learning Nexus has professional production services available to support customers with their creating and editing endeavours.

44. [e-Z Studio](#) by Learn Soft Technologies

e-ZStudio's object oriented approach provides unprecedented control over the efficient reusability of content and its logic. It separates the content, its appearance and its behavior. The look and feel of each course can be swapped out even after the content has been organized because the system keeps styles, navigation rules, and persistent graphics in distinct layers and objects, which are separate from the learning content.

45. [Memorize](#) by Memorize

There's a lot to learn. Time is limited. Learning facts and terms is necessary but often boring and slow. Memorize.com pages have interactive learning modes. They make facts clear and lucid. Create a page in seconds! Share or assign it. Earn badges while learning!

46. [MOBL21](#) by [mobl21.com](#)  
Mobl21 is an award-winning, mobile learning application that supports a dynamic, unstructured way of learning. Using Mobl21, educators can develop content that learners can access from their mobile devices, allowing them to study at their own pace and therefore, perform better.
47. [Firefly Sim](#) by Mzinga  
Anyone with basic computer skills can use Firefly Simulation Developer to create advanced, sophisticated software simulations, yet Firefly still offers experienced developers incredible control and flexibility.
48. [Publisher](#) by Mzinga  
With its simple, web-based user interface and embedded social technologies throughout the authoring platform and its resulting courseware, the Mzinga Publisher team-based authoring tool is the industry's most powerful eLearning authoring platform, enabling dispersed developers of any skill level to collaborate in real-time to create exceptionally engaging, interactive eLearning.
49. [Toolbook 11.5](#) by Platte Canyon  
When it is time to create cutting-edge training that involves thorough instruction, great use of media, interactive content, and innovative navigation, ToolBook is often the clear choice.
50. [Training Maker](#) by ProProfs  
Create online courses from existing documents, videos & presentations! ProProfs is the easiest way to make an online course for business training or education. Deliver learning anytime & anywhere. ProProfs is a fully hosted, user friendly & highly functional LMS software. Add images, articles, documents, powerpoints, videos, quizzes & more.
51. [Qlibris](#) by Qube Learning  
QLibris is a fully hosted, zero-client highly-scalable online authoring platform that provides an Integration Gateway used to create, maintain, and support: QBooks, QGames, and QLibraries.
52. [SoftChalk Cloud](#) by SoftChalk  
SoftChalk Cloud is the fastest, easiest, most flexible way to create and manage e-learning content for delivery inside or outside of a LMS. Educators can create engaging, interactive, media-rich learning content that directly integrates with any LMS or website.
53. [eStudio](#) by xtractore  
Studio is an authoring tool for creating complete and advanced e-learning productions. With the inherent flexibility in eStudio, the content, pedagogy or structure of an e-learning will not have to be restricted to limited templates or functionality.
54. [eQuick](#) by xtractore  
Quick enables rapid learning. You can produce an m-learning activity by using text, image, sound or video. Participants can interact by selecting answer alternatives presented in the course. You can also create basic tests using eQuick.

55. [StudyMate Class](#) by Respondus. A web-based version that resides within the online course. Instructors and students can create items collaboratively; student participation can be monitored and graded

## Appendix M. Characteristics of a Complete E-Learning Solution<sup>35</sup>

1. Assessment and curriculum design and development	<ul style="list-style-type: none"> <li>Organizational and individual needs assessment</li> <li>Setting competency standards of performance</li> <li>Goal setting and incentives</li> <li>Roadmap to educational success</li> </ul>
2. Branded educational content	<ul style="list-style-type: none"> <li>Proven, high-quality intellectual capital</li> <li>Timely, relevant, and consistent information</li> <li>Keeping fast-changing content current, dynamic, and refreshed</li> <li>Off-the-shelf and customized</li> </ul>
3. Broad and easy access to information	<ul style="list-style-type: none"> <li>Anyone, anytime, anywhere, any subject</li> <li>Multiple technology-based delivery methods</li> <li>Synchronous and asynchronous</li> <li>Enabling just-in-time training</li> </ul>
4. Engaging user experience	<ul style="list-style-type: none"> <li>Rich multimedia experience</li> <li>Realistic simulations and role playing</li> <li>Video-based teaching and storytelling</li> <li>Advice and explanations from experts/mentors</li> <li>Animated case studies and examples</li> <li>Interactive games, activities, and music</li> </ul>
5. Regular reinforcement	<ul style="list-style-type: none"> <li>Personalized and/or real-time online mentors</li> <li>Web-casts, interviews, live events</li> <li>Practical exercises and application</li> <li>Facilitated workshops and discussion groups</li> <li>Desktop advice, special events, and updated learning opportunities</li> <li>Weekly newsletters and relevant articles</li> </ul>
6. Collaborative online communities	<ul style="list-style-type: none"> <li>Access to fellow learners, instructors, business leaders, and experts</li> <li>Access to system knowledge base</li> <li>Private company and global communities</li> </ul>
7. Centralized tracking and administration	<ul style="list-style-type: none"> <li>Easy and automatic knowledge management</li> <li>Tools to evaluate progress of individuals or groups</li> <li>Assessment metrics to pinpoint employee needs and goals</li> <li>Measuring return on investment</li> </ul>
8. Scalable Technology	<ul style="list-style-type: none"> <li>Leveraging existing open industry standards</li> <li>Scalable to any size enterprise</li> <li>Flexible technology to include groups of workstations or the entire organization</li> <li>Easy integration with client's internal systems</li> <li>Delivering media rich broadband experience</li> </ul>
9. Organizational consulting, implementation, and integration	<ul style="list-style-type: none"> <li>Integration with existing curriculum and training delivery system</li> <li>HR and IT Administration training</li> <li>Employee incentive and accreditation programs</li> <li>Performance reviews</li> <li>Cultural support for self-study</li> <li>Customized management training support</li> <li>Behavioral change measurement and reporting</li> </ul>

<sup>35</sup> Source: From "Corporate e-learning: Exploring a new frontier," by Bachman, K., 2000, *Internet Time Blog*, Exhibit 19, p.30. Ninth House Network and WR Hambrecht+ Co. Retrieved from <http://www.internettime.com/Learning/articles/hambrecht.pdf.pdf>

**Appendix N. Sample Survey 1 “e-Learning for Deputy Clerks” Distributed to Elected District, County and Combined Clerks in the State of Texas**

1. Please state your position

- District Clerk
- County Clerk
- Combination Clerk

Other (please specify)

2. How many years have you held your current position?

- Less than 1 year
- 1- 5 years
- 5-10 years
- More than 10 years

3. Please state your age:

- 19 y/old or younger
- 20-35 y/old
- 36-50 y/old
- 51-69 y/old
- 70 y/old or older

4. The results of recent research reveal that there are attitudinal differences among different generational groups toward training and training methods. Please state the number of deputy clerks under your supervision by their approximate age (including full time and part time positions)

19 y/old or younger	<input type="text"/>
20-35 y/old	<input type="text"/>
36-50 years old	<input type="text"/>
51-69 y/old	<input type="text"/>
70 y/old or older	<input type="text"/>
Total number of deputy clerks	<input type="text"/>

5. Which of the following training techniques and methods are you currently using for training of deputy clerks? (Please check all that apply)

- Performance Aids (simple written reminder or a list of steps for performing a task)
- Flow Charts and Schematics (decals or apps)
- Procedures Manual
- Procedures Manual with Assessment/ Demonstration of Skills
- Computer-Based or Web-Based Training Modules
- Reading, Audio or Video training modules on CD/DVD

Other Methods (please describe)

6. Would you be willing to share the copy of these items with me?

- Yes
- No

Other (please specify)

7. Of the e-Learning techniques and methods identified below, which do you currently use for training of deputy clerks, and which would you use if they were available to you for no cost or low cost? (Please check all that apply)

	Currently Using for Training of Deputy Clerks		Would Like to Use for Training of Deputy Clerks	
Web Pages/ Online Reading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Demonstration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Web-Based Training Modules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Tests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Surveys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Q & A pages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Audio and Video	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Podcasts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online List of Steps for Performing a Task	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electronic Performance Support Systems (EPSS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Online Discussion Groups & Forums	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Quick Reference Guide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Self-Paced Courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Message Board / Mailing Lists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Classrooms & Coaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Broadcasts of Live Seminars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chat/ Instant Messaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I do not use any of the methods stated above	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other e-Learning Techniques and Methods that I use or would like to use for training of deputy clerks:

8. Do you agree with the statement, "E-Learning projects can be implemented only with the help of vendors or specialists such as content experts, project managers, graphic artists, instructional designer, and other persons with special programming skills"?

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

Other (please specify)

9. In your opinion, how familiar are *the majority* of your deputy clerks with digital applications and media tools (such as Internet, podcasts, YouTube, Facebook, Skype, apps on iPhones, etc.)?

- Not Familiar
- Somewhat Familiar
- Familiar
- Very Familiar

Other (please specify)

10. Is there an employee(s) in your office who can effortlessly handle computers, video games, and Internet applications and who could help you to implement, and other employees to get acquainted with, a simple e-Learning project if such project is available to you for little or no cost?

Yes

No

Other (please specify)

11. What is the level of *your personal* acquaintance with the following media tools?

	At Least Daily	At Least Weekly	At Least Monthly	Few Times a Year	Never
<b>Participant</b>	<input type="radio"/>				
I read wikis (like Wikipedia)	<input type="radio"/>				
I read blogs	<input type="radio"/>				
I visit photo web sites	<input type="radio"/>				
I listen to podcasts	<input type="radio"/>				
I visit sites that host Power Point presentations	<input type="radio"/>				
I subscribe to RSS feeds	<input type="radio"/>				
<b>Contributor</b>	<input type="radio"/>				
I comment on blogs	<input type="radio"/>				
I contribute to wiki articles	<input type="radio"/>				
I share my bookmarks online	<input type="radio"/>				
I share my RSS feeds	<input type="radio"/>				
I use Facebook	<input type="radio"/>				
I use Flickr	<input type="radio"/>				
I use LinkedIn	<input type="radio"/>				
I use MySpace	<input type="radio"/>				
I use Twitter	<input type="radio"/>				
<b>Creator/ Producer</b>	<input type="radio"/>				
I produce podcasts	<input type="radio"/>				
I share my own presentations via a Web site	<input type="radio"/>				

I write my own blogs	<input type="radio"/>				
I share my own photos	<input type="radio"/>				

Other (please specify)

12. How many live conferences, seminars or lectures have you attended this year (excluding the in-house training offered by the County Personnel Department or by judicial software providers such as Tyler, NetData, etc.)?

13. How many deputy clerks who do not hold supervisory positions in your office have attended live conferences, seminars or lectures this year (excluding the in-house training offered by the County Personnel Department or by the judicial software providers such as Tyler, NetData, etc.)?

14. Please state the amount of the following allocations in the 2015-2016 budget for your office:

The amount of funds allocated for training & conferences

The total amount of office expenditures

15. May I contact you if I have further questions related to your answers to this survey? If so, please provide your name and contact information and the time of the day that is the most convenient for you.

## Appendix O. Survey 2. “e-Learning Training Initiatives” Distributed to State Judicial Branch Educators

1. Which of the following training techniques and methods do you currently use for training of judicial officers in your state? Which of the methods, if any, are used for training of deputy court clerks? Please check all that apply.

	Judicial Officers	Deputy Court Clerks
Web Pages/ Online Reading	<input type="checkbox"/>	<input type="checkbox"/>
Online Demonstration	<input type="checkbox"/>	<input type="checkbox"/>
Web-Based Training Modules	<input type="checkbox"/>	<input type="checkbox"/>
Online Simulation	<input type="checkbox"/>	<input type="checkbox"/>
Online Assignments	<input type="checkbox"/>	<input type="checkbox"/>
Online Assessments and Tests	<input type="checkbox"/>	<input type="checkbox"/>
Online Surveys	<input type="checkbox"/>	<input type="checkbox"/>
Online Q & A Pages	<input type="checkbox"/>	<input type="checkbox"/>
Stored Audio and Video Presentations	<input type="checkbox"/>	<input type="checkbox"/>
Podcasts	<input type="checkbox"/>	<input type="checkbox"/>
Online Performance Aids (reminder or a list of steps for performing a task)	<input type="checkbox"/>	<input type="checkbox"/>
Online Learning Communities/ Discussion Groups/Forums	<input type="checkbox"/>	<input type="checkbox"/>
Online Quick Reference Guide	<input type="checkbox"/>	<input type="checkbox"/>
Online Self-Paced Courses	<input type="checkbox"/>	<input type="checkbox"/>
Online Message Board/ Mailing Lists	<input type="checkbox"/>	<input type="checkbox"/>
Virtual Classrooms and Online Coaching	<input type="checkbox"/>	<input type="checkbox"/>
Broadcasts of Live Seminars and Other Training Events	<input type="checkbox"/>	<input type="checkbox"/>
Chat/ Instant Messaging	<input type="checkbox"/>	<input type="checkbox"/>

User-Generated Content	<input type="checkbox"/>	<input type="checkbox"/>
Online Job- Related Game	<input type="checkbox"/>	<input type="checkbox"/>
None of the above	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

Please provide your contact information if you are willing to provide more detailed information regarding the training methods used for judicial officers and deputy court clerks in your state. This includes information such as the costs, vendors used, subject matter experts' contact information, program evaluations, etc.

<b>Name</b>	<input type="text"/>
<b>Company</b>	<input type="text"/>
<b>Address</b>	<input type="text"/>
<b>Address 2</b>	<input type="text"/>
<b>City/Town</b>	<input type="text"/>
<b>State/Province</b>	<input type="text"/>
<b>ZIP/Postal Code</b>	<input type="text"/>
<b>Country</b>	<input type="text"/>
<b>Email Address</b>	<input type="text"/>
<b>Phone Number</b>	<input type="text"/>

3. Web 2.0 approaches (social networking sites, blogs, video sharing sites, etc.) allow users to interact and collaborate with each other in a social media dialogue as creators of user-generated content in a virtual community, in contrast to regular Web sites where users are limited to the passive viewing of content.

Are you considering implementing new Web 2.0 approaches and social media tools for training of judicial officers in the next two to three years? Do you consider such approaches for training of deputy court clerks'

	Judicial Officers	Deputy Court Clerks
No current plans	<input type="checkbox"/>	<input type="checkbox"/>
Considering supplementing current training with Web 2.0 approaches and social media	<input type="checkbox"/>	<input type="checkbox"/>
Considering Web 2.0 approaches and social media to replace traditional approaches	<input type="checkbox"/>	<input type="checkbox"/>

4. If you are considering the implementation of Web 2.0 approaches or social media tools, what do you plan to implement? Please describe.

5. Do you use a learning management system (LMS) for training judicial officers in your state? Do you use a LMS for training of deputy court clerks?

	Judicial Officers	Deputy Court Clerks
Yes	<input type="radio"/>	<input type="radio"/>
No	<input type="radio"/>	<input type="radio"/>

6. If you are using a learning management system, please answer the following question. Otherwise, please skip to the next question.

	Yes	No
Does the LMS allow addition of extra features such as social media tools?	<input type="radio"/>	<input type="radio"/>
Would you be willing to share more detailed information about the LMS you are using (costs, vendors used, SME's, program evaluation, etc.)	<input type="radio"/>	<input type="radio"/>

7. Rapid learning becomes an integral part of the authoring practice worldwide. While the definition of rapid e-Learning varies, the most common attributes are the "short-form" or "bite-size" learning modules that can be rapidly viewed by a learner and fast, perhaps cheap, development of e-Learning modules without special programming skills.

Do you use rapid learning methods for training judicial officers in your state? Do you use any of these methods for training of deputy court clerks?

	Judicial Officers	Deputy Court Clerks
We use rapid learning methods	<input type="radio"/>	<input type="radio"/>
We do not use rapid learning methods	<input type="radio"/>	<input type="radio"/>
We are planning to use rapid learning methods in the next one to two years	<input type="radio"/>	<input type="radio"/>

Other (please specify)

8. Can you recommend any free or low-cost e-Learning tools, applications or systems that can be successfully used for training of judicial officers? In your opinion, may such tools and applications be used for training of deputy court clerks?

Choice 1	<input type="text"/>
Choice 2	<input type="text"/>
Choice 3	<input type="text"/>
Choice 4	<input type="text"/>
Choice 5	<input type="text"/>
Choice 6	<input type="text"/>
Choice 7	<input type="text"/>

9. What other information would you like to share about your state's training programs, in particular, for deputy court clerks?

Are there other people you would recommend I speak to about training initiatives for judicial officers and deputy court clerks? Please provide their contact information below, if available.

10.

Address

Name

Company

Address

Address 2

City/Town

State/Province

ZIP/Postal Code

Country

Email Address

Phone Number

**Appendix P. The Number of Clerk's Offices Currently Utilizing  
e-Learning Methods for Training<sup>36</sup>**

No	Methods	Number of Respondents Utilizing the Method	% in Total Number of Respondents
1	Not using any of the methods	45	29
2	Web Pages/ Online Reading	38	25
3	Web-Based Training Modules	38	25
4	Online Demonstration	29	19
5	Online Discussion Groups and Forums	13	8
6	Online Quick Reference Guide	13	8
7	Online Audio and Video	11	7
8	Chat/ Instant Messaging	9	6
9	Online List of Tasks for Performing a Task	8	5
10	Electronic Performance Support Systems (EPSS)	7	5
11	Online Message Board/ Mailing Lists	7	5
12	Online Self-Paced Courses	6	4
13	Online Assignments	5	3
14	Online Tests	5	3
15	Online Q & A Pages	5	3
16	Broadcasts of Live Seminars	5	3
17	Online Surveys	4	3
18	Podcasts	3	2
19	Online Classrooms and Coaching	1	1

<sup>36</sup> In descending order by the number of offices utilizing each method.

**Appendix Q. E-Learning Methods Currently Utilized  
and Desired in the Future by Respondents<sup>37</sup>**

No	Method	Number of Respondents who Currently Utilize a Method, %	Number of Respondents who Desire to Utilize a Method, %
1	Web Pages/ Online Reading	59	50
2	Web-Based Training Modules	48	59
3	Online Demonstration	39	66
4	Online Discussion Groups and Forums	33	75
5	Chat/ Instant Messaging	31	72
6	Electronic Performance Support Systems (EPSS)	28	72
7	Online Message Board/ Mailing Lists	27	77
8	Online Audio and Video	23	79
9	Online Surveys	21	79
10	Online Quick Reference Guide	20	80
11	Online Assignments	18	82
12	Podcasts	17	83
13	Online Tests	15	85
14	Broadcasts of Live Seminars	15	85
15	Online Q & A Pages	14	89
16	Online List of Tasks for Performing a Task	14	89
17	Online Self-Paced Courses	14	89
18	Online Classrooms and Coaching	3	97

<sup>37</sup> Based on the number of answers received for each sub-category, where the total number of answers received for this sub-category is 100%.

**Appendix R. The Gap Between the Number of Respondents Currently Utilizing e-Learning Methods of Training and Those Who Desire to Have It Available<sup>38</sup>**

No	Methods	Currently Utilized Methods		Desired In the Future Methods		Gap, %
		Number	% In Total	Number	% In Total	
1	Online Q & A Pages	5	3	32	21	<b>700</b>
2	Online List of Tasks for Performing a Task	8	5	51	33	<b>660</b>
3	Online Self-Paced Courses	6	4	36	24	<b>600</b>
4	Online Tests	5	3	28	18	<b>560</b>
5	Broadcasts of Live Seminars	5	3	28	18	<b>560</b>
6	Podcasts	3	2	15	10	<b>500</b>
7	Online Assignments	5	3	23	15	<b>460</b>
8	Online Quick Reference Guide	13	8	51	33	<b>412</b>
9	Online Surveys	4	3	15	10	<b>375</b>
10	Online Audio and Video	11	7	37	24	<b>336</b>
11	Online Classrooms and Coaching	1	1	29	19	<b>290</b>
12	Online Message Board/ Mailing Lists	7	5	20	13	<b>285</b>
13	Electronic Perform. Sup. Systems (EPSS)	7	5	18	12	<b>257</b>
14	Chat/ Instant Messaging	9	6	21	14	<b>233</b>
15	Online Discussion Groups and Forums	13	8	30	20	<b>231</b>
16	Online Demonstration	29	19	49	25	<b>169</b>
17	Web-Based Training Modules	38	25	47	31	<b>124</b>
18	Web Pages/ Online Reading	38	25	32	21	<b>84</b>

<sup>38</sup> In descending order by the size of gap.

**Appendix S. Allocation to Training in the County Clerk’s Offices Budget and Participation  
in Live Training Events of Elected Clerks and Deputy Court Clerks.**

Respo ndent No	Number of Clerks in the Office	The Number of Live Training Events Attended by the Elected Clerk	The Number of Live Training Events Attended by the Deputy Court Clerks	The Amount Allocated for Training	The Amount of Funds Available Per Person <sup>39</sup>
1	1	3	0	3500	1750.00
2	1	3	0	2,250	1,125
3	1	2	1	1,100	550.00
4	1	3	0	2,000	1000.00
5	2	3	0	Unknown	Unknown
6	2	4	2	3000	1000.00
7	2	3	2	1500	500.00
8	2	3	2	4,500	1,500
9	2	1	2	3,500	1,500.00
10	2	4	0	2,500	833.33
11	2	2	1	2,800	933.33
12	2	1	0	2,000	666.67
13	2	3	0	4500	1500.00
14	2	2	1	3,000	1000.00
15	2	3	0	1,800	600.00
16	2	1	1	1500	500.00
17	2	3	2	6,000	2,000.00
18	2	3	2	Unknown	Unknown
19	2	2	0	5,000	1,666.66
20	2	3	2	2000	666.67
21	2	7	2	2,000	666.67
22	2	8	2	5,000	1,666.67
23	2	4	1	3,000	1,000
24	2	3	0	5,000	1666.67
25	3	2	0	3200	800.00
26	3	5	0	3500	875.00
27	3	4	0	2,500	625.00
28	3	3	1	3,500	875.00
29	3	1	1	2,500	625.00
30	3	4	0	5,000	1,250.00
31	3	2	3	2000	500.00
32	3	0	0	2,700	675.00
33	3	0	0	1,500	375.00
34	3	1	1	2,550	637.50
35	3	2	0	2,500	625.00
36	4	0	0	1500	300.00

<sup>39</sup> Including the elected clerk.

36	4	1	0	2,000	400.00
37	4	5	3	Unknown	Unknown
38	4	4	2	4000	800.00
39	4	1	0	2000	400.00
40	5	2	4	3000	500.00
41	5	4	2	2250	375.00
42	5	6	2	5,500	916.67
43	5	2	0	2,000	333.34
44	5	3	2	2,000	333.33
45	5	4	0	4000	666.67
46	5	1	0	5000	833.33
47	6	3	0	3000	428.57
48	6	3	2	1,500	214.29
49	6	2	3	3000	428.57
50	6	2	3	1700	242.86
51	7	5	2	5100	637.50
52	7	0	0	3,000	375.00
53	7	3	4	7,000	875.00
54	8	3	0	2500	277.78
55	8	2	1	7,500	937.50
56	8	2	5	6,000	666.67
57	9	0	0	Unknown	Unknown
58	10	2	2	4500	409.09
59	11	2	0	Unknown	Unknown
60	11	2	4	Unknown	Unknown
61	12	4	3	2,000	153.84
62	13	6	2	4000	285.71
63	16	4	1	4000	235.29
64	16	4	2	3,500	205.88
65	17	3	0	5,500	305.56
66	17	6	14	4000	222.22
67	19	6	3	11,743	587.15
68	21	3	2	6,000	272.22
69	22	3	3	6000	260.87
70	25	2	0	9,000	360.00
71	27	5	2	5,000	178.57
72	30	6	3	3,500	112.90
73	41	6	4	Unknown	Unknown
74	43	0	0	12,000	272.72
75	71	8	0	16,600	230.56
76	80	3	12	8,000	98.76
77	712	231	121	NA	NA

**Appendix T. E-Learning Training Techniques and Methods Currently Used for Training  
Judicial Officers and Deputy Court Clerks in Other States, in Descending Order**

No	Total Answers	Type of Online Learning	Used for Training Judicial Officers		Used for Training Deputy Court Clerks	
			No	States	No	States
1	9	Web- Based Training Modules	9	Utah, Nebraska, Alaska, Florida, Kansas, California, and other states <sup>40</sup> (3)	6	Utah, Nebraska, California, Michigan, and other states (2)
2	8	Web Pages/ Online Reading	8	Utah, Alaska, Florida, California, Michigan, and other states (3)	5	Utah, California, Michigan, and other states (2)
3	8	Quick Reference Guide	7	Utah, Nebraska, Alaska, Florida, California, Michigan, and other states (1)	5	Utah, Nebraska, California, Michigan, and other states (1)
4	6	Demonstration	2	California and other states (1)	5	Nebraska, Michigan, and other states (3)
5	6	Stored Audio and Video Presentations	4	Florida, California, Michigan, and other states (1)	4	Nebraska, Michigan, and other states (2)
6	6	Self-Paced Courses	4	Utah, Alaska, Florida, California	4	Utah, Nebraska, California, Michigan
7	5	Broadcasts of Live Seminars and Other Training Events	5	Utah, Nebraska, Florida, California. Michigan	2	Nebraska and other states (1)
8	4	Surveys	4	Nebraska, Florida, Kansas, and other states (1)	2	Nebraska, Kansas
9	4	Performance Aids	2	California and other states (1)	4	Nebraska, California, and other states (2)
10	3	Simulation	1	California	2	Nebraska and other states (1)
11	3	Q & A Pages	2	California and other states (2)	2	Nebraska, California
12	3	Learning Communities	1	Other states (1)	3	Nebraska, Kansas and other states (1)
13	3	Message Board/Mailing Lists	3	Alaska, Michigan, and other states (1)	1	Other states (1)
14	2	Assignments	1	Alaska	1	Nebraska
15	2	Assessments/ Tests	2	Nebraska, Alaska	1	Nebraska
16	1	Podcasts	1	Michigan	0	
17	1	Chat/ Instant Messaging	1	Other states (1)	0	
18	0	Virtual Classrooms and Coaching	0		0	
19	0	User-Generated Content	0		0	
20	0	Job-Related Game	0		0	
21	0	None of the Above	0		0	

<sup>40</sup> The states that preferred to stay unidentified.