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### STUDIES

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## Quality Measures, Human Factor and Failures of e-Learning

## Wyznaczniki jakości, rola czynnika ludzkiego i błędy e-learningu

### Searching for Quality

The Internet-driven technological revolution together with exponential public use of professional and public computer networks at rapidly lowering costs, has spurred the parallel rapid growth of on-line e-Learning education in every educational system. Distance learning technology rely on the faster and virtual dissemination of modern educational contents to free education

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from the constraints of traditional physical universities, classrooms and teaching techniques to reach now students in multiple settings (urban, local, rural, regional or global) through new “Open” Universities (Marengo, Marengo, 2005; Visser, Simonson, 2011).

Western traditional universities had resisted at first including technology-based learning in their educational systems, but in the 1990s first the U.S. and then many Western universities have overcome their skepticism to embrace the rapid growth of the Internet-based e-Learning academic revolution as a major cost-saving educational tool to expand enrollments, despite even reach traditionally under-served student populations, while overcoming location constraints (remote areas, military bases, abroad). With new distance-learning delivery-systems and wide-range academic courses for credit coming initially from “for-profit” business-academic providers (Phoenix, Argosy, DeVry, Keiser, etc.), also many traditional universities joined the e-Learning Revolution by accepting credits-transfers from accredited on-line distance-learning providers, while developing more slowly their own “non-profit” academic blended courses (Rimanelli, Orlando, 2017).

This e-Learning academic revolution has steadily percolated down most national educational systems world-wide to provide Internet-based access, computers in classrooms, various learning tools and basic on-line teaching skills at all levels from “Open” Universities to even High Schools. Distance-Learning classes has widened systematically the educational pool for on-line e-Learning education attracting both technologically-savvy traditional on-campus students (who add some blended learning classes to their degrees), and predominantly non-traditional working professional students (for degree-completion from A.A.s to B.A.s in their disciplines or for cyclical re-accreditation with higher degrees or graduate certificates). In turn, on-line education has also reached various sectors of population marginalized by limited national education access, poverty and/or below-average national educational performance-levels (Friedman, 2005; Lundvall & Borras, 1999; Khan, 2001).

However, there remains a keen need to attain higher quality standards for e-learning despite numerous attempts to achieve proper quality measures. Of course, the more important general discussion about the effectiveness, legitimacy and validity of distance learning, must be set aside here. Nevertheless, this crucial argument between those, who treat e-learning as general, absolute and unavoidable solution for today’s education shortfalls, and those who treat it as a mere necessity in certain circumstances and prefer staying strongly

on the basic master-pupil attitude to teaching will be present somewhere in the background of the trade-offs discussed in this paper. In any case, the mainstream enthusiastically supports the implementation of distance learning globally and always, or blended version of reasonable e-learning, in addition to traditional face-to-face pedagogy, the need for good quality educational product is obviously necessary.

Authors of e-learning content need those quality standards to define their products, to follow certain rules in crafting learning scenarios and proper means to obtain learning outcomes. Administrators and decision-makers need quality standards to make proper choices and have a good universal comparison framework. E-learning community needs quality standards to provide exchangeability and comparability. Quality measures are needed also by students and teachers to allow them to make e-learning an effective tool.

Among various standards the best known and among the oldest is SCORM (Sharable Content Object Reference Model), whose five factors to improve the effectiveness of the e-learning process are: accessibility, interoperability, durability, reusability and cost-effectiveness. There are advantages of applying standards in building content blocks, which can be easily transferred between systems and implementations. Thus, applying SCORM standards improves e-learning process, lowers costs and provides exchangeability of learning content. There are also various certifications, like ECC (E-learning Courseware Certification), which are used to measure the quality of e-learning materials within certain methodological frameworks and in comparison with the best practices in education. Stress is put on the compatibility, user-friendly interface, appropriate educational project. Other standardizations, like IMS, AICC, IEEE/LTSC or LRN 2.0 fulfill the same need for uniform norms of learning objects production, on-line course-management, content-portability, inter-operability, e-Learning and knowledge-management.

Certification of e-learning products is necessary, but not sufficient for the best effectiveness of learning. We should also separate the e-learning standards of quality from e-learning specifications. An extreme opinion expressed by Harvi Singh, stresses that there are no quality standards in e-learning and the only we have a series of groups developing specifications (Singh, 2000).

Looking for quality measures of distance learning, not necessarily within any certified quality standards framework, is lately an important research topic, involving multiple attitudes and theoretical frameworks. One of the most interesting attitudes connects the process-oriented characteristics of

cyber-infrastructure (CI) with the measures of innovation success within the academic community (Berman, 2008), or the culture of continuous change with the excellence of e-learning (Teixeira, 2007). There is still strong need to classify measure-types for the broad e-learning quality assessment.

Since the beginning of the Twenty-First Century and especially from the dawn of MOOCs era, many researchers and institutions have conducted in-depth investigations on quality standard for e-learning and distance education, while still seeking to define common guidelines for the e-learning content production, for the adoption of technological instruments and processes, and for the implementation of collaborative projects, at a global level. From then on one cannot formulate any reasonable set of quality criteria without taking into account the idea of openness in distance learning, including free access to high quality open content on-line (like in MOOCs) and the idea of massive horizontal co-operation between learners within the same collaborative learning-process. Quality measures are subject to innovative solutions and the list of indicators described below is open-ended.

### **Human Factor of Distance Learning Quality Measures**

To improve the quality of future e-learning projects, below is a list of key quality conditions to be taken into account:

- Teaching process should be complementary with traditional teaching (preference of blended-learning).
- E-learning process should simulate all informalities of traditional learning – treating it as a life-long process, using *ad hoc* learning, providing all kinds of on-demand and short-time learning.
- People are the most important component, and each e-learning system should encourage self-motivation and self-conviction of the learning staff.
- E-learning should be realistic – analyzing, controlling and balancing the IT literacy in the application environment.
- Much is written on the need to personalize learning content, e.g. to adjust pace of knowledge acquirement to the student's capabilities – individualization is not only the expectation, but a necessity in seeking to personalize teaching, personalize software, personalize terminals, personalize methods and evaluation systems.

- Presence on-line (even if only virtual) is still presence – it is best to have as much presence as possible. If there are no genuine face-to-face contacts between instructor and students, it is best to have as many in cyberspace as possible by expanding the presence on-line of instructors, or virtual tutors and mentors.
- Every learning context is already a community situation – this collective educational identity should also be incorporated as an important pedagogical aspect for any e-learning system by its web-designers to allow students and instructors to establish the broadest possible, integrated, virtual e-learning communities (including both domestic and international students).
- External and social context must be taken into account to make each e-learning system an open system, as much as possible. This means e.g. support for active citizenship and/or virtual volunteerism of e-students, while also applying e-learning to excluded communities, like prisons or poor marginalized groups.
- E-learning systems personnel (both web-designers and templates for individual course-designers) should receive better feedback from end-users to improve e-learning systems as a self-conscious process of growth. Monitoring results and efforts by end-users, plus analysis of good practices and on-line resources are also vital to expand the web-designers' background and competence in crafting more effective e-learning platforms and courses. Authors and institutions should also intensify research on the effectiveness of on-line instruction in particular, and research on methodology of e-learning in general.

## Quality Contexts

Let us focus on the main issues defining every e-learning system and at the same time draw the set of contexts of e-learning potential. Within each domain one can define two extremities and look for a “golden mean” somewhere in the middle between those extremes.

- Institutional context:
  - First extreme – the old educational structure is traditionally modified step-by-step, mostly by assimilation rather than by accommodation.
  - Second extreme – e-learning means a “new era” and educational revolution for the whole academic institution, which has to balance

traditional and innovative learning processes, be them a mixture of traditional face-to-face campus, or blended campus and on-line, or exclusively on-line ones.

- ▶ In the middle – a separate, respected, specialized educational unit is made responsible for the adaptation of e-learning and promoting structural changes for the institution as a whole.
- Methodological context:
  - ▶ First extreme – each instructor adopts his/her own methodology to create and apply e-learning materials, with each unit realizing its own strategy.
  - ▶ Second extreme – commercial-based introduction of ready-made sets of e-learning solutions without any respect for specificity of subjects, persons and branches.
  - ▶ In the middle – task-related methods, discussed individually, but implemented in functional blocks institution-wide.
- Communication context:
  - ▶ First extreme – user-unfriendly interface, traditional communication in “electronic clothes”.
  - ▶ Second extreme – artificially hyper-friendly user interface, with no correspondence to the real communicating situations.
  - ▶ In the middle – on-line support for the users, respecting their own creativity.
- Technological context:
  - ▶ First extreme – completely own, unique, e-learning system.
  - ▶ Second extreme - ready-made, commercially-produced, standardized e-learning system.
  - ▶ In the middle – tailor-made adaptation of the best solutions for technical infrastructure, partly out-sourcing and hosting contracts with leading producers.
- Evaluation context:
  - ▶ First extreme – no monitoring of instructor and students, with evaluation only “on demand”.
  - ▶ Second extreme – continuous monitoring system.
  - ▶ In the middle – reasonable system of monitoring with complete reports on demand.

- Management context:
  - First extreme – e-learning is treated as a separate task, totally independent from face-to-face “main-stream teaching” on traditional campuses.
  - Second extreme – each teacher becomes an e-learning specialist.
  - In the middle – continuous consulting, exchange of information on problems and achievements, and stimulating system of financing.

### **Cardinal Failures of Distance-Learning: The New “Seven Deadly Sins”**

Despite the unquestionable effectiveness of distance-learning in many (or most) contexts and cases, there are also many examples of misuse or wrong application of this educational tool.

- For example, *misattribution* is a common didactic failure. When all learning objects are on the same level of abstraction and are too demanding intellectually, or are not preceded by any introductory tracks of learning – these are all examples of missing proper didactical attributions.
- *Intemperance* is another example of distance learning vice, that occurs quite often, when didactic material offers too much information, or too fast to be successfully absorbed within the limited period of the distance-learning course. By doing so we can easily exceed our expectations and obtain a negative didactic outcome.

Misattribution and intemperance are just two of many examples of the most severe problems of negative performance for distance learning programs with cascading negative repercussions on the users. There is a whole typology of serious “cardinal sins” of distance learning, which are denounced in this paper both to warn and convince all distance-learning practitioners that to avoid these pitfalls, they must also constantly improve quality and effectiveness of e-Learning education.

Attempts to classify distance-learning failures point at misuses and wrong applications of this kind of on-line educational tool, while this paper seeks to propose different typologies: some sins are either failures of omission because they fail to include certain factors into consideration, while others are errors of commission because they apply specific solutions that result instead in failure.

Thus, we can say that there are seven types of wrong applications of distance learning. By comparing this list to the seven deadly sins or capital vices, this

paper “redubs” them as the “Seven Cardinal Sins of Distance Learning”. It is not the first time, that authors use similar symbolic schemes to pinpoint failures within a given area of research, like Daniel Schacter’s description of such negatives of human memory (Schacter, 2001), or Eileen C. Shapiro’s map of the “Seven Deadly Sins in Business” (Shapiro, 1998).

### **“Pride” or Overestimation**

Several times over the last years very ambitious e-learning endeavors have emerged, large in scale and cost, with high innovation and great potential of applicability. At the same time, some of them were lacking rationality and there was no need to use all the potential of some of those e-learning systems. Why has this happened? Usually because of a lack of instant feedback from the users. Bottom-up signals suggesting the scope and form of the content is decisive for the appropriate implementation of e-learning solutions. The best practices are not the biggest ones. Instead, over-estimation of users expectations is one of the reasons for the discrepancy between planned and actual e-learning system effectiveness.

And even worse error occurs where e-learning system designers become too ambitious and end-up pushing not for the best educational solution for e-learners, but for the most sophisticated possible one dictated by their own pride as web-masters or the pride of their own institution.

### **“Greed” or Underestimation**

The opposite of overestimation and probably even worse is underestimation of e-learners’ needs, while by all accounts greed is always ineffective as a policy for growth. Indeed, many e-learning institutions want to maximize the growth of total users as a revenue-stream, rather than invest in their quality. Proper e-learning system, as all other business products should be based on precise analysis or on a business plan. But as much as revenues or profit calculation play important roles for investors, the same importance should be given to e-learners’ needs and educational quality standards of on-line courses.

Qualitative measures of e-learning systems usability and impact can be used in proper ways to measure the cost-effectiveness of e-learning by taking into account not only raw numbers of users, but also focusing from the side of



e-learners on numbers of entries, hits, posts, downloads, turn-around times, types of on-line degrees offered, evaluation assessments or surveys, while from the side of instructors focusing on the type of communities served, e-learning capabilities of instructors per each type of on-line degree offered, follow-up trainings, content up-grades or changes in overall website platforms.

### **“Lust” or Funds-Dependence**

Another fallacy of e-learning systems occurs when their authors start with the construction of new learning project only because it results from specific contracts gained, or financing resources obtained, or project competitions won. Structural and methodological solutions and e-learning contents remain secondary compared to the primary goal – to fulfill the project conditions. This is often also the by-product of the political balance within the specific educational institute on how to transition from traditional campus-based education to innovative on-line and blended-learning, where part of the institution’s administration is not really competent on e-learning technologies and procedures. Thus, fear of losing control of the e-learning revolution, while not fully understanding its flexible applications are the key causes that lead administrators to rigidly stick to the agreed-upon chosen web-platform and on-line course-format, rather than experiment with different applications and solutions.

Sometimes the on-line web-platforms proposals for specific e-learning coursework and degrees submitted to competitions and potential donors, have a snazzy presentation, but remain superficial and sketchy. Acceptance of the proposal opens the possibility to both implement and improve the e-learning project, but in many cases its web-masters find themselves restricted to following the original premature ideas enclosed in the contract, while being prevented from adding any future logical modifications of the pre-agreed web-platform and related on-line educational system. Usually this results in introducing a ready-made set of e-learning solutions with no respect for specificity of subjects, persons and branches. There is no place and time for appropriate task-related methods, discussed individually and checked in practice. There is no place for personalization of e-learning content, or for individual adjustment of e-learning system features to student’s capabilities

and expectations. There is no place to personalize teaching, software, terminals, methods and systems of evaluation.

A final justification of this state of controlled technological e-learning is based on the equally restrictive impact in U.S. university institutions of their accreditation agencies, which require every 5-10 years a strict correlation between rigid 3-credits courses and diplomas with standardized master-courses for both campus and on-line courses to be offered only by accredited instructors in both settings. This reduces space for academic institutions to rely heavily on less-expensive Teaching-Assistants and Tutors (unless they are in a PhD. program), compared to higher-wage professors, and increases the difficulty to train in e-learning both of these categories of instructors. In this context, academic institutions' administrative officers will keep acting as a rigid institutional block to any innovative freedom for "techies" and on-line instructors to fully experiment in e-learning and accepted web-platforms, while focusing instead on accreditation agencies preference for assessment systems of the efficiency of teaching and software (Rimanelli, Orlando, 2017; Orlando, Rimanelli, 2018).

A creative exit to this cycle of self-restriction is the infrequent option of changing wholesale the web-platform and course-delivery system once the related academic institution does change its official web-provider from a commercial one (like BISK or Pearson) to a university-controlled and internally-run one by buying a well-used web-platform and running it directly (like the global cloud software platforms Blackboard/Canvas used by the University of South Florida, or Desire2Learn/D2L/Courses used by Saint Leo University) with just minimal external technical support. The problem in this choice for the academic institution is how to trade-off its limited control of the e-learning process and revenue-stream (where courses, web-platform and cost-sharing percentages of revenues are controlled mostly by the external commercial web-provider) to an initially more expensive, but later lucrative university-controlled web-platform and on-line courses.

The clear advantage for the university is securing complete institutional and financial control over the e-learning process. But the real trick is in the timing of the web-platform transition process as this requires the academic institution to hire its own web-designers, get used to the new web-platform and redesign in a new format the most-used courses in an accelerated tempo to meet the agreed time-table before the old web-provider ceases all access to

its proprietary on-line coursework. This is when indeed the inevitable impact of delayed processing time in redesigning the most vital and most used on-line coursework vs. the loss of countless marginal on-line electives can negatively affect financially the academic institution the longer such e-learning delay in redesigning takes its toll. Of course, the fast turn-around on redesigning on-line courses leads to immense pressure on the web-designers and a high attrition-rate of losing these vital technologically-savvy personnel increases as time goes by, further raising the financial cost of the transition between web-platforms for the academic institution (Rimanelli, Orlando, 2017).

### **“Envy” or Limitations**

E-learning technologies and methodologies have become increasingly more “open accessed”. But there are still vulnerable to institutional “selfishness” in limiting access to certain new solutions and implementations. Digital divide on one side, but human limitations on the other are both present at times, resulting in technological and didactical exclusion in this domain.

One-direction learning means also narrowing the educational process to mere access – in this case with the use of the Internet – to the e-learning content. No successful e-learning system can exist now without interaction with the broader social context of the educational process (virtual communities, future employers, scientists, etc.). Content-users should be the partners for content deliverers.

The sin of envy manifests itself sometimes even inside the educational institution, especially when content-management is operated by a kind of isolated educational unit within the university, having no respect or connection for the broader context of the whole knowledge management system and even broader context of knowledge transfer, knowledge networks, excellence clusters and so on. This is especially troublesome in those academic institutions where the predominant identity is that of traditional campus learning by faculty still highly suspicious of the e-learning alternative, which then remains contained to a secluded institutional entity (ie: Center of On-line Learning) geared at servicing a smaller portion of the general student population (be it an on-line Master in Business, or Pastoral/Diaconate studies, or on-line B.A. and M.A. certificates). Worse it is when this secluded on-line institution is unable to expand its chosen student population or secure the campus faculty to standardize their coursework

along the on-line faculty (often part-timers) and thus reinforce the divisions between both academic delivery systems and rival faculties unable to cross-over teaching or even offer blended-teaching. In the end, this is as much a failure of academic direction and implementation by the university administration, as it is of a close-minded faculty unwilling to teach across the campus and the technological e-learning curriculum, or develop joint-degrees with other universities who implement aggressive on-line education programs (Rimanelli, Orlando, 2017).

### **“Gluttony” or Intemperance**

Intemperance occurs when the didactic material offers either too much information or required a too rapid absorption of information within the limited period of the distance-learning process. When the number of possibilities, the student’s choices and the optional learning paths are too big, the user may lose orientation and concentration. And this can easily lead to a negative didactic outcome. This is not the medium (or not only the medium) that matters in learning. As was shown already in the 1980s the benefits from learning with electronic devices (multimedia, computers) are significant, but as the result of instructional strategies, rather than the mere medium of teaching (Clark, 1983).

Much more is necessary than just delivering or opening access to a properly constructed educational content. The focus of on-line learning is and must always be the learner and the learning process. In Mohamed Ally’s words on-line learning is “the use of the Internet to access learning materials; to interact with the content, instructor and other learners; and to obtain support during the learning process, in order to acquire knowledge, to construct personal meaning and to grow from the learning experience” (Ally, 2006).

### **“Wrath” or Misattribution**

Misattribution is a popular failure of didactic content and occurs when all learning objects are on the same level of abstraction and are too demanding, or are not correlated by any introductory tracks of learning. When we fail to fit the content to the level of expertise and the level of learning needed we commit the “sin” of improper didactical attribution.

But when we focus on methodologies, rather than technologies, the research objective becomes the achievement of a perfect balance between teaching needs and technological systems, also taking into account creative possibilities that the latter offers. E-learning should be realistic – should analyze, control and balance the IT literacy in the application environment to provide the proper balance between technological constrains and educational challenges.

One possible solution, among many others, is to replace great, monolithic modules of educational content by more flexible units, that are more flexible and adjustable to the individual pace of learning and level of training.

E-learning systems designers should provide better feedback from the users – to become more self-conscious. Monitoring of results and efforts of users, analysis of good practices and access to good on-line resources should enhance the web-designer's background. Both authors and institutions should intensify research on the effectiveness of on-line instruction in particular, and research on the methodology of e-learning in general.

### **“Sloth” or Persistence**

Some of the e-learning systems designers are so proud of their product that they do not see any need to change the system for years and years. Yes, the system may be still perfect and efficient, and sometimes any change would spoil it. Sometimes, yes, the better is an enemy of the good. But usually this attitude of not changing anything that works well for years is wrong. To put it even stronger: when we accept the *status quo* of proposed e-learning solutions, we are probably already in regress. We have to answer to the novelties and innovations, but also to the new skills of Twenty-First Century students. As Gonick put it: “we are also challenged to develop institutional responses to the realities brought to us by a new generation of learners (...). Both millennia's, with their native technology proclivities, and the lager population of lifelong learners, returning to education for career enhancement and life enrichment, will have little tolerance for ‘playing school’” (Gonick, 2006).

The same applies to the implementation of new media techniques and also to the very philosophy of new approach, more bottom-up than top-down and more participatory. Institutions are sometimes far behind the students in this respect. Folksonomy instead of taxonomy, Web 2.0 distributive learning

methods, virtual and augmented reality technologies, social groups-based learning, gaming, avatars, intelligent agents e-learning, etc. – all this is everyday experience for new learners. And we have to be ready to challenge their needs as both e-learning technology and the students evolve *in tandem*. The best way to achieve this goal and avoid the impact of key cardinal failures of distance-learning is the application of a three-phase model for distance-learning modeling and its didactic implementation to turn distance-learning not as a static form of learning and content, but as a process:

1. First is the phase of intention of either the information sender, or learning process supervisor.
2. Second is the actual educational message in the shape of content and its form.
3. Third is the receiver's reaction, with his/her e-learning progress. What he/she had access to, what did he/she understand and how the content was internalized, as well as what skills and competences were achieved.

### **Saint Leo University as a Case-Study of the “Seven Deadly Sins”**

In this context, the case-study of Saint Leo University (near Tampa, Florida in USA) offers an example of the need for constant administrative vigilance to avoid both the trap of exclusive technology-dependent e-learning systems in higher education institutions and the new “seven deadly sins” of distance-learning, which the university sought to avoid (only in part successfully) by migrating in time through different web-platforms and changes of content-receivers to provide better access to human users.

Since 1997 the private Catholic Saint Leo University in Florida, USA, has reinvented itself as a fully-integrated joint traditional, long-distance and on-line university with a mixture of campus/centers, on-line and blended courses. Saint Leo University has striven to enhance teaching excellence and standardization at both its traditional campus and 30 non-traditional Distance Centers by evolving new academic technologies for On-line, Blended and traditional courses. In three cycles (1997-2005, 2005-2015, 2015-current) parallel models of academic experimentation were developed to apply new on-line technologies for both non-traditional students at its Centers and attract new students to new 8-weeks on-line courses (Rimanelli, Marco, Orlando and Frank, 2017; Orlando, Frank, Rimanelli and Marco, 2018).

By 1996 a major unexpected existential crisis from falling enrollments and revenues vs. rising costs was undermining Saint Leo's old-style Catholic institutional "culture" and distance-learning Centers among U.S. Military bases. The survival of any failing small Liberal Arts college, like Saint Leo, to enter the Twenty-First Century, required a well-focused mission, vision and full power for the President to implement needed reforms and overcome entrenched institutional resistance to e-Learning. What was needed were rational administrative integration in long-term institutional strategic goals of all these scattered moving parts, plus a commitment to acquiring leading-edge innovative technologies to enhance the institution's national reputation and increase students' enrollment as a rebranded, modern, tech-savvy Catholic university of Central Florida compared to academic competitors (both private colleges and state universities)(Kirk, 2015; Kirk, 2012–13).

Prior to 1997, Saint Leo University had no institutional working knowledge or training in e-Learning, on-line courses and Internet, so this institutional revolutionary embrace of distance-learning was made possible by its new President Arthur F. Kirk Jr.'s commitment to technological innovation to both modernize the college and boost enrollments at a time of sudden growth of distance-learning education throughout the USA. First, Saint Leo University integrated instructors and students within an institution-wide Lap-top/computerized innovative educational settings for its B.A./M.A. programs, followed by a campus-wide technological transformation with computer/Internet, lap-tops and Wi-fi in classrooms, Dorms and individualized Lap-top loans to its 2,500 campus students enrolled in degrees, while in 2011–15 the two new techno-"Green" mega-buildings of the D. Tapia School of Business and Kirk Hall merged classrooms LED computer screens and mix-office/studying/walking areas (Rimanelli & Orlando, 2017; Saint Leo University, 2009, p. 1–12; Saint Leo University, 2012a; Saint Leo University, 2012b, p. 1–10).

Then by renting the private web-platform provider BISK own audio-visual technologies, Saint Leo University was able to standardize both campus and distance-learning Centers with access to new 8-weeks on-line classes, establishing on-line standardized Master-Syllabi, providing compulsory faculty-wide training on distance-education, and close interface between a number of faculty-developers and web-designers to forge new on-line courses mixing video-clips, photos, printed coursework, weekly discussions and weekly mini-essays. By relying on BISK's on-line platform, course-designers and expert

administrators, Saint Leo would educate its own Faculty into both developing and teaching 8-weeks-long on-line courses, which linked instructionally both far-flung Centers and most importantly the deployed Military students in the field as far as Afghanistan. Later, the introduction of blended courses (part in class at campus and Centers and part on-line) allowed a wider degree of course experimentation (Kirk, 2008, slides 7–8, 10, 18–20; Kirk, 2010, slides 1–10; Saint Leo University, 2010, p. 18–19).

However, after the initial success, the university administration realized it had no control whatsoever on shaping learning-contents, holding on to on-line students (on-line admissions and enrollments remains proprietary of BISK) and most revenues (60% went back to BISK). Successful enrollments growth focused on both On-line Programs (since 1997–98) and expanding Graduate Programs (Certificates and full Degrees, taught both on-campus and on-line) from the pioneering M.B.A. and Business spin-offs to also Criminal Justice, Pastoral Studies, Counseling Psychology (an unsuccessful 2001–2008 venture), Education's Masters and Social Work (Saint Leo University, 2011, p. 22–23; Orlando, Rimanelli, 2018).

By 2005, Saint Leo University chose to switch to a university-owned on-line platform (Learning Studio leased from Pearson), which allowed President Kirk to secure full control over the e-Learning contents, most revenue-stream and on-line enrollments, despite the initial heavy costs of losing BISK's technological and administrative tools (loss of proprietary courses within a 2-years transition period; a two-years sharp decline in enrollments; high costs of replacing BISK personnel with new university on-line personnel). This led the university to focus on accelerated creation of new standardized on-line courses and campus teaching with 8-weeks Master Syllabi with Internet resources for campus and introduction of Blended-courses. Additionally, the administration focused on fully redeveloping its university-owned on-line courses-content (introducing stronger educational content with the PIE system, mandatory outcomes built-in all courses, and mandatory assessments with students' evaluation of courses and supervisor evaluation of on-line faculty)(Saint Leo University, 2005, p. 1–17; Saint Leo University, 2015, p. 1–26; Bocchino, Buckley, 2015, p.1 & 3).

In this way the university successfully used new technology to enhance the knowledge transition from web-platform to a more friendly user-content and strengthen the university's competitiveness with other non-profit higher



education institutions. Additionally, all courses university-wide were now mandated in a standardized format on the 8-weeks format of the on-line ones (16-weeks campus courses remained officially free for faculty to teach as they pleased, but all on-line Instructors and Adjuncts were compelled to teach and apply only the standardized version) to secure proper outcomes delivery, and maximize control and integration of the entire faculty over different delivery-systems. This finally got the entire university integrated with campus, Centers and on-line students into its own “One University” vision (a work constantly in-progress from its first unveiling in the 2000s to its full multi-visual format of 2014), regardless of different students and staff populations or multiple education delivery-systems. Enrollments rose at record levels with a 200% growth rate during the 1997–2007 decade, rising total students from 7,400 in 1997 to 9,931 in 2001 to 12,677 in 2004 to 14,700 in 2007 and 16,349 in 2014 (Kirk, 2007; Rimanelli & Orlando, 2017; Orlando & Rimanelli, 2018).

Yet such successful administration initiatives were abandoned one by one since 2015 when the university was confronted by the impending end of its software collaboration with Pearsons, due to that company’s decision to withdraw from the distance-learning education. This forced Saint Leo University first to shift its distance-learning teaching to the new university-owned on-line platform Canadian-style Desire 2 Learn/D2L and then to redevelop once again all its courses, almost exclusively relying on the university’s web-developers with limited faculty supervision to customize simpler on-line delivery content, without audio-visuals, but full of outcomes, compulsory tests and a mandatory learning-assessment exam for all students to provide the administration with controlled outcomes of the students’ learning curves for the regional assessment authority (Southern Association of Colleges & Schools-SACS) to certify the university educational success in the field. The institution also imposed D2L on campus as multi-use skeleton platform for administration (grades, assessments), permanent content-loading, student attendance record, and Blended-courses, while making them interface with both campus and Centers courses for easy content-loading (Rimanelli, Orlando, 2017; Orlando, Rimanelli, 2018; (Saint Leo University, 2005, p. 1–17; Saint Leo University, 2015, p. 1–26; Bocchino, Christine, Buckley, Tom, 2015, p. 1 & 3).

The flexible use of D2Lin 2014–2018, augmented by special technology funds, allowed also the integrating of new gaming case-studies beyond standard business courses for specialized Political Sciences courses involving multi-

disciplinary faculty coordination across all schools (from the confines of a single course to a maximum of 9 courses and 100 students) in the experiential learning process or simulation called Alternative Reality Learning Experience (ARLE) and based on contemporary political issues related to U.S. Presidential Elections and International Affairs. Finally, in 2012-2015 overall enrollments rose one last time from 15,930 to 16,440, before falling steadily since 2015 due to various factors. Overall student population fell dramatically by 4,000 in 2015-19, due to the end of the "Baby-Boomlet" and sharp reductions of the U.S. Military following costs-cuts and forces withdrawals from Middle-East peacekeeping. Additionally, the university's fascination with modern technological shortcuts forced the posting on D2L of syllabi and most courses-contents, as well as mandatory recording of all grades and assignments, did not succeed in enhancing student learning performance as it had been touted technologically with such web-platform. Instead, attention saturation between the students' personal technologies and personal e-mails competed with university content-delivery systems and official e-mails, plus Social Media chatter and the introduction through D2L of a university-wide Social Media site Lions SHARE into reducing further the students' own commitment to content-learning in class. With this triple crisis of transition to D2L, falling enrollments and revenues, Saint Leo University has been struggling as well with its own "seven deadly sins" of distance-learning dogging "Sloth" by repeatedly changing technologies and web-platforms for e-Learning; becoming "Wrath" by "dumping-down" courses-content in a non-university-like level without faculty correction; "Gluttony" by providing an avalanche of course-contents, data and exams to force the students to learn at a lower-level of absorption; "Pride" in the administration's accomplishments in high tech e-L"Envy" earning, but failing to retain a strong technological content in the subsequent migrations to different web-platforms and providers; "Lust" in seeking to maximize revenue-streams in on-line courses and pre-packaged web-platforms, but "dumping-down" the on-line experience to attract the most students; "Envy" by imposing pre-set technological and educative structures in the web-platform that maximize institutional control, but limit faculty freedom to modify course-content and exams outside the standardized e-Learning materials imposed on end-users (Orlando, Rimanelli, 2018; Rimanelli, Orlando, 2017).

## Conclusion

The conclusion suggests the application of a three-phase model for distance-learning modeling and its didactic implementation. We should treat distance learning not as a static form of learning and content, but as a process. This process can be divided into three phases or stages.

1. First is a phase of intention. Intention of the information sender, or of the learning process supervisor.
2. Second is the actual educational message in the shape of content and its form.
3. Third is the receiver's reaction, with his/here-learning progress. What the student had access to, what did he/she understand and how to internalized the content. And, moreover, what skills and competences he/she achieved. The e-learning process should simulate informalities of traditional learning by treating it as a life-long process, using *ad hoc* learning, learning by networking, providing all kinds of on-demand, short-time learning, encouraging self-motivation and self-conviction of the learners.

E-learning systems should be not technology-dependent, but human-dependent or user-dependent. Further development of on-line teaching methodology should be limited, unless remembering that on the other end of any teaching process is a human being. Future e-learning systems should be tailored for human users and open for changes stimulated by altering content receivers.

**Abstract:** There are numerous attempts towards proper quality measures or quality standards for e-learning: authors of e-learning content need those standards to define their products; administrators and decision-makers need them to make proper choices; and the e-learning community needs them to provide exchangeability and comparability. Quality measures are needed also by students and teachers. Looking for quality measures of distance learning, not necessarily within any certified quality standards framework, is lately an important research target, involving multiple attitudes and theoretical frameworks. There is still strong need to classify measure types for the broad e-learning quality assessment.

This essay enumerates the key quality conditions to be taken into account in e-learning projects. Then it focuses on the main issues defining every e-learning system and at the same time drawing the set of contexts of e-learning potential. Within each con-

text (institutional, methodological, communication, technological, evaluation and management) the paper defines two extremes and looks for the “golden mean”, somewhere in the middle. Despite the unquestionable effectiveness and applicability of distance-learning in many (or most) of the above contexts, one can point out a list of instances of misuse or wrong application of this educational tool. The second part of the paper examines the most popular failures of didactic content, like misattribution, over-estimation and various other limitations.

This analysis provides a typology of all cardinal failures of distance-learning as new “seven deadly sins” to enable better learning from these errors. The essay’s thesis stresses that e-learning systems should be not technology-dependent, but should be tailored for human users and open for changes of content-receivers. The conclusion proposes a three-phase approach for distance-learning modeling and implementation: intention, presentation and reaction. Achieving such end has been recently attempted with mixed results in the USA by Saint Leo University near Tampa, Florida, which since 1997 has enhanced teaching excellence and standardization at both its traditional campus and Distance Centers by evolving new academic technologies for On-line, Blended and traditional courses, while migrating in time through different web-platforms (BISK, Learning Studio/Pearson and recently D2L/Courses) to mitigate most failures of distance-learning.

**Keywords:** e-learning, quality measures, human factor, failure, quality standards

**Streszczenie:** Liczne są próby określania wyznaczników lub standardów jakości e-learningu: twórcy kursów e-learningowych potrzebują tych standardów do opisywania swoich produktów; administratorzy i decydenci na ich podstawie dokonują wyborów, a społeczność e-learningowa potrzebuje ich do zapewnienia wymienialności i porównywalności. Miary jakości potrzebne są także studentom i nauczycielom. Poszukiwanie wyznaczników jakości e-learningu, niekoniecznie takich, które wpisują się w ramy jakiegoś zestawu certyfikowanych standardów jakości, jest w ostatnich latach ważnym celem badawczym, skupiającym na sobie wielorakie podejścia i ramy teoretyczne. Nadal istnieje mocna potrzeba sklasyfikowania typów pomiaru do szerokiej oceny jakości kursów e-learningowych.

W niniejszym artykule wymienione zostały kluczowe warunki jakości, które powinny być brane pod uwagę w projektach e-learningowych. Następnie poddano analizie główne kwestie określające każdy system e-learningowy, a jednocześnie stanowiące zbiór kontekstów warunkujących potencjał projektów e-learningowych. W każdym z wyróżnionych kontekstów (instytucjonalnym, metodologicznym, komunikacyjnym, technologicznym, ewaluacyjnym i managerskim) określone są dwie skrajności i podjęta jest próba znalezienia pomiędzy nimi „złotego środka”. Niezależnie od niepodważalnej efektywności i stosowności nauczania na odległość w wielu (może nawet w większości) wymienionych kontekstów można wskazać listę przypadków złego

użycia lub złego zastosowania tego narzędzia nauczania. W drugiej części artykułu opisane zostały wyniki badań dotyczących najczęstszych błędów dotyczących treści dydaktycznych, takie jak zła atrybucja, przeszacowanie i wiele innych.

Przeprowadzona analiza pozwala na wyróżnienie pewnej typologii kardynalnych błędów uczenia na odległość, jako nowego zestawu „siedmiu grzechów głównych”, na których można się lepiej uczyć. Teza artykułu podkreśla, że systemy e-learningowe nie powinny być zależne od technologii, ale powinny być przykrawane do dyspozycji ludzkich użytkowników i otwarte na ich zmienność. W konkluzji zaproponowane zostało trójfazowe podejście do modelowania i implementowania systemów nauczania na odległość: intencja, prezentacja i reakcja. Osiągnięcie takiego celu zostało ostatnio zaimplementowane z mieszanymi wynikami w Stanach Zjednoczonych na Uniwersytecie Saint Leo w Tampa na Florydzie, który począwszy od 1997 roku uzyskuje dobre wyniki w doskonaleniu i standaryzowaniu zarówno na tradycyjnych kampusach, jak i w centrach nauczania na odległość, dzięki zastosowaniu nowych akademickich technologii w uczeniu on-line, w uczeniu w wersji blended i w tradycyjnych kursach, a jednocześnie elastycznie przenosząc się na kolejne typy platform e-learningowych (BISK, Learning Studio Pearson a ostatnio D2L/Courses) po to, by ominąć pułapki większości omówionych w artykule błędów uczenia na odległość.

**Słowa kluczowe:** e-learning, wyznaczniki jakości, czynnik ludzki, błąd standardy jakości

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