

The Trust Factor in Online Instructor-Led College Courses

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Imagine an invisible “social glue” that enables strangers to coalesce and cooperate in an online distance learning course. It makes learning (which involves risk-taking) possible. It encourages people to share about their backgrounds, expertise, resources, and social connections. It often is assumed to be present, unless it is broken. It is only then that people often even consider it. When broken, it’s very hard to mend. This elusive element is foundational to much of human endeavor. It has a cultural angle, based on different societies, peoples, values, and times. It is so necessary that some computer scientists are considering a total rebuild of the Internet (known as the “clean slate” movement) in order to better accommodate it. While this factor has been studied in depth in a number of fields, no widely accepted definition has been accepted cross-field or even in-field.

This mysterious substance is *trust*. In eLearning, this is *virtual trust*. The uses of distance technologies and scenarios around eLearning make trust that much more elusive. Indeed, interchanges between instructors and learners have to pass a mutual two-way pseudo-“Turing Test,” a test which originally was set up to see if computing machines could sound human (emulate humanity)—but which may be used to see if humans have retained their humanity in their online exchanges.

Indeed, surprising findings emerged from a recent study of instructor-led online learning that was conducted through WashingtonOnline (WAOL). WAOL is a consortium of 34 community and technical colleges in Washington State. The courses here are known as “high-tech / high touch” ones which mix the eLearning technologies with plenty of instructor engagement. The learners are freshman and sophomore students from around the world. Twenty-eight full college degrees may be earned solely online, and numerous other certificates and programs may be experienced.

A recent study on the role of trust in eLearning used the Online Trust Student Survey (OTSS) instrument, which went through rigorous development and validity testing measures (Hai-Jew, *Operationalizing Trust...*, Fall 2006, pp. 16 – 30). The purpose of the research was to find answers to the following five research questions:

1. How is trust manifested in an online instructor-led classroom?
2. What does a high-trust online learning classroom and community look like?
3. What factors contribute to “trust” or “mistrust,” and how are these elements related?
4. Is there a relationship between high-trust and the effectiveness of student online learning (as measured by the proxies of student retention/persistence, course grades, and student perceptions)?
5. How can trust as an asset be protected and leveraged in a virtual learning environment?

In higher education in the Western world, ethical higher education instructors must meet certain criteria. They must respect student boundaries and not infringe on their free will or privacy. They must respect learners in all their variety and differences. They must keep their own personal politics and opinions out of the classroom and maintain objectivity. They must be fair in their assessments. They must provide accurate credentials to learners. They must contribute new knowledge to their respective fields and publish and present widely. They must stay current with the curriculum. They must introduce knowledge with the proper context and without skew. They must be technologically savvy, so as not to get left behind. They must promote new learning and be open to new ideas, even those that may shake paradigms and prior assumptions. They must pursue “truth” but not insist upon one way of seeing an issue. They must use logic to support their assertions. They must write everything in their own words, give credit where it’s due (if they borrow), and they must not ever plagiarize. If they choose to engage in “social engineering,” they must do so with the highest benevolence possible. They must create a situation of safety for learners.

Instructors have a position of high trust. They handle private information of students. They define high-minded things like truth. They solicit sensitive information from learners. They train individuals to carry on important work for future generations.

Online Trust Student Survey (OTSS) Instrument

This research explored the role of trust in high-interactive instructor-led online college courses through WashingtonOnline (WAOL). Based on a literature review of trust, a 47-item Online Trust Student Survey (OTSS) explored the trust relationships between the learner and the instructor, the learner and fellow learners, the learner and the curriculum, the learner and the oversight organizations, and the learner and courseware technology. This research explored the effect of high trust online learning environments on learning effectiveness, as measured by the proxies of student retention/persistence, course grades, and student perceptions. Six hundred and thirty (630) current learners (out of a potential 9,500 enrolled in WAOL courses during Winter 2005) were surveyed.

With a .922 score of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy, the OTSS instrument seemed to offer some strong grounds for sampling confidence because of the low probability for factor multicollinearity. A principal component analysis with orthogonal rotation (varimax) was conducted on the 47 items in terms of the *respondents' rating of the respective factors' importance for online trust*, with values of less than .35 suppressed. Eleven components were extracted with factors loading, but the top five accounted for 34 of the loaded items, and the remaining six accounted for only 13. The variables involved PRO-SOLID (professionalism of academic organizations and the solidity of the curriculum), AUTHEN (the authenticity of the learning), INSPRES (instructor presence online), PEERINT (peer interactions), PROBRES (student problem resolution).

An analysis of *student learner agreement with the various 47 items* was conducted, with a Kaiser-Meyer-Olkin Measure of Sampling Adequacy at .923. Fifty-four point nine five (54.95) percent of the variance among these factors could be explained by 11 factors. The top three factors accounted for 33.21% of cumulative variance. The top 7 factors accounted for 39 of the variables and the remaining four accounted for the remaining 7. These components, in descending order, included INSEFFET (instructor effectiveness and ethics); STRUINTE (structural integrity of the overseeing organizations); TECHNORE (technological responsiveness); STUDEMPO (student empowerment); INFOVALI (informational validity); SOCLIFE (the social life of learners online), and REALHON (real honesty in online simulations and peer honesty).

A low positive correlation was found between high trust and student success. Post-survey online interviews were conducted with online freshman and sophomore community college students in the low-trust and high-trust categories, distance learning instructors, and administrators linked to WAOL. These interviews revealed the central role of trust, the importance of instructor telepresence, the central role of oversight organizations and the uphold-

ing of policy, with implications for online course design, curriculum development, and instruction regarding trust-building strategies.

Identifying Trust Components in Online Instructor-Led College Courses

The purposes of this study were to examine (1) the roles of trust in solely Web-based, high-interactive, instructor-led college courses and (2) the potential effect of trust on effective student learning, as measured by the proxies of student retention, course grades, and student satisfaction and perceptions.

With the emphasis on community-building and relational support in online courses, trust may be an important but often invisible feature. The particular distance learning (DL) model which is instructor-led suggested the importance of interrelationships between the learners and the instructor (Hinman, March 2002, p. 34). Yet the virtual aspects of online learning might impede or preclude the building of trust between individuals, in light of the absence of a shared history, the brevity of a 10-week quarter, the absence of nonverbal communications cues, and the lack of a four-walls environment within which to interact (Spiceland, July 2002, p. 2). What then is the nature of trust, and how might this construct be reflected in online learning based on learner perceptions? The research strove to comprehensively address trust for a content-valid survey instrument.

Trust is an essential part of human relations and cooperation. Organizationally, it has been labeled as a "key enabler," a "foundation of support for high performance" (Shaw, 1997, p. 7). Golin identified its fundamental nature as the most basic element of social contact (2004, p. 11). Trust was the "willingness of a party to be vulnerable to the actions of another party, based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer, Davis & Schoorman, 1995). In organizational literature, trust appeared at the individual, group, firm, and institutional levels (Rousseau, Sitkin, Burt, & Camerer, July 1998, p. 393). Trust may be an individual attribute, a behavior, a situational feature, or an institutional arrangement (Sitkin & Roth, 1993, as cited by Bigley and Pearce, July 1998, p. 405). Trust may be calculus-based, knowledge-based, or identification-based (Dibben, Harris & Wheeler, April 2003, p. 6). Trust may be personal, expertise, and structural-based (Joni, March 2004, p. 84). Emotions affect trust, and trust behaviors affect emotions (Lewis & Weigert, 1985, p. 971; Fairholm, 1994, p. 111). Transactional and pragmatic trust may evolve into transformational and more profound trust over time (Reina & Reina, 1999, pp. 158 - 163).

Rousseau, et al. set two preconditions for trust to arise based on research: risk related to the potential of a low grade, of emotional harm if one's self-image was not rein-

forced, of embarrassment in front of college peers if one's learning was seen as lacking, and of emotional rejection. As Schein pointed out, there might be two kinds of anxiety involved in learning: learning anxiety and survival anxiety (Coutu, March, 2002, p. 104). Molm, Takahashi and Peterson suggested that the relationship between a college instructor and a college student involved power relations with "high exchange value" (Mar. 2000, p. 1407). Chan and Mauborgne argued that true intellectual risk-taking required trust – trust that one would not be ridiculed, that one would not be left with incorrect assumptions but would be redirected, and that one would be supported in exploration. In the partnership between the instructor and learner, trust was a key connector. Trust inspired motivation to engage and contribute (Chan & Mauborgne, 2003, n.p.). There might be risk in an instructor striving to make changes in a learner's thought-life and abilities, with trust as a basic prerequisite to a leader trying to make change among members of a group (Sashkin, 1986, as cited by Fairholm, 1994, p. 102). The second condition of trust, according to Rousseau, et al., was interdependence. Some online classes might require group work, group presentations, and group discussions to arrive at constructivist learning. Indeed, there might tend to be interdependence between the faculty and the learner as well.

Researchers identified elements of online communications that made electronic context-building difficult. Nohria and Eccles (1992) cited three challenges: the lack of co-presence in time and space (asynchronicity); the lack of the entire bandwidth (sight, hearing, smell, taste, and touch), and the lack of capacity for interruption, feedback, and learning (Jarvenpaa & Leidner, 1995/1997, p. 1). In this high-tech low-touch culture, the lack of a human element could affect mutual trust in human relationships. These manifestations might be psychological, social, and organizational. "The limited social presence of computer-mediated communication encourages the misinterpretation of remarks, and the asynchronous nature of most conversations hinders the immediate repair of damages, stressing and even disrupting relationships," suggested Wellman, et al. (Wellman, et al., 1996, pp. 223 - 224). Misperceptions could linger or evolve into full-blown disagreements, confrontations, and personality conflicts.

Harvey (1983) proposed that "ambiguity, caution, deceit, editing or screening, limiting channels, secrecy, indirection (grapevine), gimmicks, hostile humor, (and) lack of emotion" might lead to distrust. Whitney observed a corrosive consequence of mistrust in complex organizational systems through misleading information and unfair rewards. The mistrust engendered waste, needless complexity, and less focus on the work (Whitney, 1994, p. 185). Lewicki suggested that the symptoms of distrust included the following: "wariness, skepticism, and such behaviors as observed defensiveness, watchfulness, and vigilance" (Lewicki, et al., 1998, p. 447).

Research Methodology Overview

The five major research questions were:

- R1. How is trust manifested in an online instructor-led classroom?
- R2. What does a high-trust online learning classroom and community look like?
- R3. What factors contribute to "trust" or "mistrust," and how are these elements related?
- R4. Is there a relationship between high-trust and the effectiveness of student online learning (as measured by the proxies of student retention/persistence, course grades, and student perceptions)?
- R5. How can trust as an asset be protected and leveraged in a virtual learning environment?

Initially, a broad review of the literature on trust, distance learning, and virtual teaming was conducted. Salient elements related to trust and its building were extracted and formulated into survey factors. Then, a preliminary draft Online Trust Student Survey (OTSS) was developed and administered to a subset of 50 WAOL learners, a dozen online instructors, and half a dozen distance learning administrators to revise this instrument. This instrument used Likert-type measurements of attitudes and behaviors based around the 47 factors surfaced by the literature review and honed by the revision of the survey instrument. The survey instrument went through a delimiting or reduction process (Glaser & Strauss, 1967/1999, p. 111) The null hypothesis read: There is no correlation at the .05 level between learners' trust level in an online instructor-led classroom and their effective learning. The research hypothesis was a directional single-tailed one. The two groups that were compared were those with low levels of online trust as compared to those with relatively higher levels of online trust as measured through an online survey instrument.

The OTSS was administered to 630 students taking courses through WashingtonOnline (WAOL) in Winter 2005. The population of learners studied involved the freshman and sophomore students taking distance learning courses from WashingtonOnline (WAOL). This Washington State entity aims to serve learners from around the world who wish to access the combined higher education and certificated offerings of Washington State's 34 community colleges and universities. Started in 1997, this organization supports consortium colleges in offering 28 degrees and certificate programs. Today, thousands of students take courses through WAOL each year. In Winter Quarter 2004, WAOL supported almost 8,000 students in 450 electronic classrooms, for a total of almost 2,500 quarterly full time equivalencies or FTEs. WAOL has trained over one thousand instructors and has about 350 active instructors at any one time (C. Broughton, Interview questions for Connie Broughton, December 2003, p. 1).

To add to the survey, a selected purposive sample of key informants, 7 administrators, 41 online instructors, and 23 online learners, were formally "interviewed" via email through post-survey interviews. Of particular focus were those who have apparently been able to build trust in their classrooms. Interviews were mostly by email with the attendant risk of low response (Watt, et al., 2002, pp. 325 - 337), but if special arrangements needed to be made such as for face-to-face, fax, or telephone interviews, these were arranged.

Factor analyses were conducted to confirm researcher hypotheses about instrument validity and reliability and to reduce the 47 variables. Any signs of multicollinearity were recorded as well. Factor analysis was conducted on the findings, with multiple analyses of variance of the factors. The instrument's internal reliability, internal consistency, and other aspects were measured as part of the factor analysis. The quantitative data were analyzed using Statistical Package for the Social Sciences 10.1.0 (SPSS). The qualitative data were analyzed through identification of themes and patterns and integrated with the quantitative findings in Chapter 4.

To achieve confidence in the results and achieve maximum practical size of a sample, the optimal sample size would be at least 630 WashingtonOnline (WAOL) students for the electronic surveys to conduct an effective factor analysis (Alreck & Settle, pp. 63 - 64, 1995, as cited by Hutton, Winter 2003, p. 1) and optimally with lower standard error of the mean. Norman and Streiner suggest that a sample size should be 5-10 times the number of variables; given the 47 variables, 235 to 470 respondents would be minimally desired (1999, p. 33). The online site collected "computer addresses" known as Internet protocols (IPs) and emails to verify that there were not double responses.

The survey respondents were 83% female and 16% male. A majority (42%) were in the 20-29 age range, with those in the 30-39 range (19%) as the second most common age group. Sixteen percent of the respondents were 15 - 19, and 16% were 40 - 49. There were 4% of those in the 50-59 age range. Nearly half (47%) of respondents were sophomores, with 27% as freshman. Fourteen percent were juniors, and 3% were seniors, with 7% in their fifth years or more of academic study. In terms of race, 84% identified as Caucasian, 5% as other, 2% as Asian American, 1% as African American, 1% as Native American, and 1% as unknown. Academically, the respondents tended to be in their second year of college (47%), with 27% as freshman, 14% as juniors, 3% as seniors and 7% as those in the fifth year. Most had fairly high cumulative GPAs (50% in the A range, 45% in the B range, 3% in the C range).

Survey respondents cited academic schedule (24%) and convenience (23%) as the main variables, with work (18%), family (13%), commute (9%), and "other" (4%) as main reasons. A few cited health, academic advisor suggestion, course reputation, and instructor reputation (each with

1%) as other explanations. When these learners begin an online course, a majority begin with positive expectations (39%). Twenty five percent said that they had a Neutral attitude towards online learning. Sixteen percent reported as being enthusiastic, as contrasted with 2% as Negative and 16% as Skeptical. This would suggest that online instructors begin with learners with a range of expectations, a majority beginning with enthusiasm and positive ideas. Only 18%, fewer than a fifth of learners, approach an online course with what may be termed as negative expectations.

Over half of the survey respondents (51%) had already taken between 1 - 5 prior online courses. By contrast, 38% had never taken any prior online courses. Eight percent had taken between 6 - 10, and 2% had taken 11 - 15 or more online courses already (or the equivalent of over one year of a full-time curriculum online). One percent had previously taken 16 - 20 online courses, which would be the equivalent of five quarters to seven quarters of online courses. A mere 0.5% had taken 21 or more online courses prior to the Winter 2005 one. In regards to these past courses, 66% said that the learning was effective, 30% reported mixed results, and 4% found the online learning ineffective.

In terms of learning familiarity (at both high school and college levels) with the subject matters of the courses they chose to evaluate in the survey, 47% had no prior experience with the topic. Twenty-one percent had one quarter of prior experience. Thirteen percent had had two quarters of experience. Eight percent had one academic year's worth of experience with the course material in terms of high school and college coursework, and 2% had had four quarters. One percent had five quarters of experience, 2% had six quarters, and 2% had 7 quarters or more of prior experience. On the whole, a majority did not have much prior learning experience or familiarity with the topic. This would suggest that learners may have had a sharp learning curve regarding the subject matter.

R1. How is trust manifested in an online instructor-led classroom?

Trust manifests itself in essential component factors based on the survey research. A run of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy of the 47 variables measuring the respondents' attitude about that variable's Level of Importance to Online Learning came with a high measure of .922. This may offer some grounds for stronger confidence in this survey instrument. With a significance of less than .000, this test appeared significant. An exploration of the Total Variance found that 11 components explained 56.333% of the variance among the factors. The largest factor accounted for 11.740% of the total variance. The smallest factor accounted for a 2.656 variance.

A principal component analysis with orthogonal rotation (varimax) was conducted on the 47 variables by the

630 student respondents' rating of importance. Values of less than .35 were suppressed. Factors were displayed listwise. Eleven components were extracted with factors loading, but the top five accounted for 34 of the loaded factors, and the remaining six accounted for only 13. The top three factors accounted for 28.377% of the variance, with the other factors contributing within the 3-4% range. The table that follows represents the findings in descending order in terms of these clusters of variables (Gall, Gall & Borg, 2003, pp. 352 - 355).

In terms of level of importance to online learning, of foremost need was the professionalism of the academic organizations (PROSOLID or professional solidity) — as expressed in a solid curriculum and the stability of the online learning environment. The next most critical factor was that of the authenticity of the learning (AUTHEN or authenticity), supported by instructor professionalism and enthusiasm. The instructor's ethics, telepresence, boundary-setting, and real-world insights (INSPRES or instructor presence) loaded as an important factor. PEERINT represented peer interactions, with the full expressiveness of learners and mutual peer learning as important points. The timely resolution of learner problems (PROBRES or problem resolution) was also a critical factor. These different factors containing these clustered variables were named broadly to include their constituent parts.

A second factor analysis was conducted on the same 47 variables but this time focusing on learner measures of their respective WAOL courses and experiences with each of these trust items. The findings from that analysis were included below. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy score for the Level of Agreement with the Student as Learner was at .923. With a significance of below .000, this measure also appeared statistically significant. Fifty four point nine five one (54.951) percent of the variance among these factors could be explained by 11 factors. The top three factors accounted for 33.212% of cumulative variance.

This rotated component matrix using orthogonal/Vari-max with Kaiser Normalization yielded the following insights. Eleven factors emerged accounting for 46 of the survey items. The top 7 factors accounted for 39 of the items, and the remaining four accounted for the remaining 7. INSEFFET, instructor effectiveness and ethics, was identified as the most important factor for building online trust among the 630 respondents. The structural integrity of the oversight organization (WAOL) and oversight colleges (STRUINTE) was identified as the second most critical factor, based on learner experiences in their courses. Technological responsiveness and stability (TECHNORE) ranked third in terms of learner concerns. Student empowerment (STUDEMPO), which involves their comfort with full expression and decision-making in the online classroom and grades reflecting actual learning, ranked as the fourth factor. The curricular validity or INFOVALI (informational

validity) emphasized the importance of having a relevant and timely curriculum. SOCLIFE focused on the social life of online learners, and the need for shared learning between peers and some shared peer values and the need for student participation. The last factor (REALHON or reality in simulations and honesty in co-learning) identified related to the reality of simulations for real-world learning.

INSEFFET represented instructor effectiveness and ethics as the primary factor. STRUINTE addressed the issue of the structural integrity of the overseeing organizations and particular efforts made to convey that. TECHNORE referred to technological responsiveness. This factor addressed issues of courseware stability, responsiveness to student problems, and their expectations given advisor commentary upon registering for an online course. STUDEMPO represented student empowerment in the online classroom. INFOVALI as informational validity addressed the need for solid and timely information in the field, in the instructor's professional credentials, and care in the handling of student information. SOCLIFE referred to the social life of learners online in terms of their interactions with peers and expectations of learning from and with them. The factor REALHON represented real honesty in online simulations and honesty among peers. This might involve the realness of the instructor, who might engage in extra-role behaviors beyond serving as virtual instructor.

The factor variables were subjected to a multivariate analysis of variance (MANOVA) with the classification variables: gender, age grouping, and year-in-college. Six hundred and thirty (630) respondents completed the 47-item online survey during the last three and a half weeks of Winter Quarter 2005 in WashingtonOnline (WAOL) courses. In Winter Quarter 2005, 3,730 students took part in system-owned courses and 680 in separate college-owned ones. In terms of private college-based courses, 2,787 enrolled in fully online courses and 2,355 in hybrid courses. Over all, a total of 9,552 students participated in WAOL-sponsored courses (Broughton, WAOL student stats and WAOL Winter 05 (A453) report, Mar. 22, 2005, n.p.). It was estimated that potentially a third of the 9,500 may have been notified about the survey (3,166 learners), and of those, the 630 responses would constitute a 19% response rate.

The mean for INSEFFET (instructor effectiveness) was 83.17 with a standard deviation of 13.50 and a standard error of .194. STRUINTE (structural integrity) had a mean of 31.02 with a standard deviation of 3.95 and a standard error of .194. TECHNORE (technological responsiveness) had a mean of 23.82 and a standard deviation of 3.99 and a standard error of .194. STUDEMPO (student empowerment) had a mean of 20.88, a standard deviation of 4.75 and a standard error of .194. A test of reliability for these four factors resulted in a Cronbach's Alpha of .6201.

For the multivariate analyses of variance (MANOVAs), the year in college showed a high frequency on the TECH-

NORE (technological responsiveness) factor ($F = 3.158, p = .014$). Those in the second academic year showed a strong interest in technological responsiveness, with a low standard deviation of 3.73. The age descriptor connected with STRUINTE (structural integrity) with an $F = 3.273, p = .006$. Those in the 20 – 49 age categories emphasized the need for structural integrity in their studies, while those 15 – 19 and 50 and older showed much wider standard deviations on this factor. Gender and age interacted for a statistically significant $F = 6.312$ and $p = .000$ with STRUINTE (structural integrity) as well. Females in their 20 to 49 categories emphasized the importance of structural integrity in their online studies.

No other statistically significant Fs were revealed between these descriptor variables and these four factors. In terms of gender differences, in a test between subjects, high Fs existed for STRUINTE (structural integrity) ($F = 21.437, p = .000$). Females (31.35 mean, 3.486 standard deviation) showed more emphasis on structural integrity than males (29.46 mean and 5.397 standard deviation). STUDEMP (student empowerment) also showed a significant difference ($F = 10.565, p = .001$). Female respondents (21.16 mean, 4.653 standard deviation) focused on the importance of student empowerment more than their male counterparts (19.56 mean, 4.979 standard deviation). Differences were observed for INSEFFECT (instructor effectiveness) with $F = 8.787, p = .003$. Female respondents (83.90 mean, 12.955 standard deviation) focused on the importance of instructor effectiveness more so than the male respondents (79.73 mean, 15.441 standard deviation) and with a smaller standard deviation. TECHNORE (technological responsiveness) with $F = 6.685, p = .010$ also showed a significant gender difference. Female respondents identified technological responsiveness (24.00 mean, 3.823 standard deviation) as an important factor in their learning while male respondents emphasized this less (22.93 mean, 4.592 standard deviation) and with less overall agreement.

The following analyses were conducted for the 47 measured variables that might contribute to online classroom trust. The amount of variance accounted for by each variable may be seen in the eigenvalues (Norman & Streiner, 1999, p. 145). A scree plot of eigenvalues showed which variables might be eliminated because of greater variance in the survey respondents' responses. Or, the standard scores might be used above to show what learners ranked as important for their online trust. The eigenvalue range for these variables spanned from 24.071 to .229. This suggested some major variance for some variables but not most. A scree plot showed the high variance for a few factors and much more conformity to the means for the others. The one variable that seemed to have the highest standard deviation (and thus variance) was that of student well being put at risk by taking an online course.

(IM3AWellbeingRisk). Most of the other variables had eigenvalues in the ranges of .5% to 2.7%.

To address potential issues of multicollinearity between these variables, a Pearson Product Moment (PPM) Correlation procedure was conducted to see if any of the items had a correlation of +0.70 or higher. Based on the PPM, the highest potential correlation was between the completeness of course materials and lectures (IM40ACompleteLectures) with the assigning of fair grades (IM39AFairGrades) with a moderate 689 Pearson Correlation. The second highest potential correlation was a moderate .616 between "IM40ACompleteLectures" and "IM37AClearWorkAssign."

R2. What does a high-trust online learning classroom and community look like?

Trust develops in an online classroom at different times of the quarter. A majority of the respondents (47%) suggest that trust develops in the middle of the course, while 41% suggest that trust exists from the beginning as a given, possibly as a kind of "swift trust." Eight percent suggest that it "never develops" in an online classroom, and 2% suggest that it develops at the conclusion of the course.

To do a regression on the independent variable of the trust measure in the online classroom and the student success outcomes for the class, first, three elements from the original survey were removed because of the reverse phrasing. 3B read, "Taking a class is a risk to my sense of personal well-being." Students ranked this low as a concern. 11B read, "Learners share critical comments such as blame, anger, and frustrations with each other." A high score on this would not necessarily indicate high trust. Also, 24B read, "I enjoy the feeling of anonymity from not meeting face-to-face with fellow students." A higher score here also would not necessarily show high trust.

High and low trust learning experiences. Five hundred and sixty four (564) WAOL learners (89.5%) ranked their learning experience in the high-trust group with a mean score of trust variables at 6.0156 and a standard deviation of .46751. The N for this group = 562. The R Square of .020 and a standard error estimate of 2.434 indicated fairly high variance. The ANOVA revealed an $F = 11.170$ and a significance of .001, which is quite a bit lower than the $p < .05$ level for statistical significance. An ANOVA revealed a significance score of p at .001, which would suggest that this particular measure may be statistically valid. This would mean that for the high-trust group that may not be much of a correlation between the high-trust aspect and student success. The examination of the coefficients showed statistical significance on both. Out of the 630 respondents, only 10.5% ranked in the low-trust category (those ranking below 5 in their TrustNumber, with 4 representing "Neutral," 5 representing "Somewhat agree" through 7 representing "Strongly agree" with the 44 trust variables linked to high trust.

The learners who perceived the online classroom as low-trust had a mean of 4.4460 with 4 ranked as "Neutral." There was a low standard deviation of .49330. For the low-trust group with an N = 68, the mean trust ranking of the 47 factors was 4.45, with a low standard deviation of .49330. The R Square was .094, with an R of .307. The ANOVA test of significance was passed with a p of .011, which is lower than the $p < .05$. However, the R of .307 also was in the low range, so there was not a clear relationship between the lower trust scores and student performance. For comparison between the high-trust and low-trust groups, the high-trust mean fell at 6.0155, and the low-trust group's mean was at 4.4460. The standard deviation was quite close for both, with the first at .46751 and the latter at .49330, which suggested a fairly close spread in variance.

R3. What factors contribute to "trust" or "mistrust," and how are these elements related?

Post-Survey Interview Responses: Students, Instructors and Administrators

Distance Learning Student Follow-up Interview

- (1) What personality indicators do you use to know whether or not to "trust" an instructor?
- (2) How can an instructor come across as "real" in an online space? Please give some from-life examples.
- (3) Do you consciously build others' (students' and instructors') trust in you when you participate in an online class? If so, how? If not, why not?
- (4) Have you ever felt like your trust was violated in an online class by an instructor? Please explain what happened. Please share as many experiences as possible.
- (5) Have you ever felt like your trust was violated in an online class by a fellow student? Please explain what happened. Please share as many experiences as possible.

For online learners, the email addresses of the learners that identified their online courses as high-trust were batch-emailed as one group, and those that identified their online classrooms as low-trust were batch-emailed as another, although the identifying differences were not made explicit to the respondents. Both groups received the same questions. First, the high-trust findings were presented, and then the low-trust ones. Twenty-three students from the high-trust group responded. Eight students from the low-trust group responded.

High-trust online learner responses. According to 23 post-survey interviews of high-trust student subjects, a high trust environment must involve consistent and regular communications. Personality indicators that learners used to determine whether or not to trust an instructor included whether the instructor's biography conveyed professional "credibility." Communications, course management, and

the instruction needed to show a level of expertise. An instructor needed to demonstrate sincerity, authenticity, heart-felt investment, and honesty. He or she needed to demonstrate a consistent, genuine concern for the advancement of the students. Instructors needed to show flexibility in accommodating learners who might have fallen ill or suffered an accident. When an instructor went beyond the surface level of work required and added deeper insights, those actions enhanced learners' senses of that instructor's trustworthiness. Another learner observed an instructor to see if he/she followed the posted guidelines of the course early on; if they contradicted their own stated goals, values, and rules, this learner began to view the instructor with mistrust. One respondent wanted an instructor to have high work ethics. Wisdom was identified as a desired personality indicator for building expertise-based trust. Students needed to feel like they were not entering an online classroom that was set up for their failure. Grades sometimes seemed to be a proxy for an instructor's attitude or feelings about the student, so learners need a sense of grading transparency and fairness.

Learners emphasized ways for instructors to acknowledge their individual personhood. Learners requested that they be called by name rather than just having a "reply," which was unaddressed to anyone, and they took exception when their names were misspelled. Others emphasized the need for instructor encouragement throughout a course, to keep learners motivated and on-track.

For an instructor to come across as real, students need to be able to form a mental picture of the instructor. This might be helped with the inclusion of a digital photo, video clip, or digital lectures. This might also be helped with instructor sharing. One student gave an example of a class where students would "pour out their hearts and souls about the injustices that had happened to them in their lives," but the instructor would not return any of his personal experiences in kind. This student ended up feeling like the student work was not reciprocated. There needed to be out-of-class one-on-one communications, by telephone or email or some other medium, to address private situations to reinforce instructor realness.

Students built trust with each other through mutual dependence for a project or school work. They also developed a sense of each other's trustworthiness based on their promptness in submitting assignments and responding to their peers. Those who turned in quality assignments merited more trust. Those who submitted work right on the deadline left an impression of lack of trustworthiness. The level of student candor also might build trust. Learners observed that in peer critiques, there needed to be suggestions and constructive criticism, not merely praise and support. For others, this trust-building between peers was a subconscious process. And yet, others said that they felt intimidated by peers and mostly focused on the relationship with the instructor.

A majority of post-survey interview respondents suggested that they didn't consciously build others' trust in themselves when they participated in an online classroom. The act of merely commenting on others' work and ideas seemed insufficient to build trust, given the limited online interactions. In terms of trust violations, students pointed to un-professionalism as the main causes for concern. An instructor's improper tone and content of message might lead students to believe that that instructor might be fundamentally untrustworthy. Learners also responded negatively to embarrassment by their instructors, and they suggested that rebuilding trust after a "betrayal" would be difficult.

Eight respondents who identified their online courses as low-trust environments in the OTSS survey offered their insights. The personality indicators that they used to determine whether or not to trust an instructor had to do with instructor availability and his or her "willingness to help, without compromising my education." Learners also cited the up-to-datedness of the course materials as important, as in a "real live classroom."

Warning signs for one learner in this low-trust group might appear as quickly as the first log-in. "A trustworthy instructor will have clear expectations for the class, put in their proper place the assignments list, and will focus on welcoming the students, communicating their excitement about and passion for the subject, and opening themselves up to help with any technical hurdles. The rule-obsessed teacher, who greets you with what amounts to a laundry list of pet peeves, is invariably the same who will not return e-mails, post to the discussion board, etc. These types (and they have been mercifully rare for me) expect their class to run itself like an ATM, put assignment in rigid format; grade is spat out at quarter's end. The trustworthy teacher listens to your postings and e-mails, responds, and participates in the class. It is also very difficult to do your best work for a ghost--an instructor needs to be present on the classroom site as frequently as the students are expected to be."

By contrast, an instructor who came across as "unreal" and untrustworthy was one who gave out perfect scores. "I realized I was getting perfect scores on everything I did, so he must not really be reading it. That made me feel like he was humoring me, not teaching me," one wrote. Another aspect of grading that concerned learners who experienced low-trust in their respective courses were those who were perceived as "emotional graders" rather than objective ones. Those instructors who fell behind in terms of grading work also might cause student mistrust. Those who graded harshly, with inconsistent feedback, and without forewarning, also eroded student trust. One respondent felt that the lack of face-to-face interactions led to an "invisible barrier" that could not be surmounted. This respondent would hold things back in terms of self-expression in order not to feel personally violated.

Another respondent who registered low trust for his instructors and peers seemed to begin with a low propensity to trust. He wrote of peers, "Frankly, I learned a long time ago not to depend on my classmates for anything, so I just do the work myself."

The respondents who perceived their online classrooms as being low-trust apparently paid attention to building trust between peers by being "encouraging and active" participants. This contrasted with those who experienced high-trust who often apparently assumed this trust and did not work to build it, according to their post-survey interview responses. "I try to openly build trust with both the students and instructor by trying to maintain a warm, friendly aura when I send correspondence, and being active enough on the boards, chat, and email that I am not an unknown 'face,'" wrote one. "With students," one wrote, "people only know that you are there if you communicate. Being encouraging, but not fake, is vital." The need for substantive and authentic communications appeared in several responses. Others offered help to their peers in terms of sharing their online learning expertise and other learning. Another way to build trust between peers was to share course insights and complaints by email in ad hoc listservs that the learners created.

Low-trust learners began with a position of defensiveness in terms of protecting their education from an instructor. They focused on the need for respect from their instructors. Many looked for signs of mistrust early on in the online classroom. Low-trust learners often viewed their peers with some distrust and approached the sharing of personal information with caution. Low-trust learners consciously worked to convey a sense of their own trustworthiness to others, in contrast to high-trust learners who apparently did not.

Online Instructor Interview

- (1) Is trust an important factor in successful online learning? If so, how? If not, why not?
- (2) How important is trust between a college **student and instructor** in an online learning environment? Why? How do you see this trust manifested?
- (3) How important is trust **between college students (peers)** in an online learning environment? Why? How do you see this trust manifested?
- (4) How important is trust between **student and curriculum** in an online learning environment? Why? How do you see this trust manifested?
- (5) How important is trust between **student and courseware technologies** in an online learning environment? Why? How do you see this trust manifested?
- (6) Is there a certain time when trust "solidifies" in an online classroom? If so, when? If never, why?

- (7) What aspects of the online classroom contribute to building trust?
- (8) What aspects of the online classroom contribute to creating distrust?
- (9) In a case of mistrust, how can a class reestablish trust?

Online instructor responses. Forty (40) distance learning (DL) faculty responded to the post-survey interviews. The average number of years of teaching DL for faculty respondents was 3.2 years, with several respondents who had taught for between one and two quarters and others who had taught more than 7 years. Names were cited only when the respondents gave clear permission to use them. Otherwise, comments were offered un-attributed.

Overwhelmingly, the instructors emphasized the importance of trust “for any learning, online or conventional” (S. Morris, Online instructor interview, March 2005, p. 2). Several interpreted this trust question also in the light of their own courses. One described the threat of co-option of her own developed courses by other instructors (J. Murphy, March 2005, p. 2). One pointed at self-trust in terms of an instructor’s own sense of competence in communicating complex concepts.

According to DL faculty respondents, this trust relationship with students was critical. L. Goolsby wrote, “There has to be a partnership between the student and the instructor that results in the student gaining the expected outcome. If the student understands this, then this bond or trust is manifested” (L. Goolsby, Online instructor interview, April 2005, p. 2). The trust was manifested between the college student and instructor in many areas. This trust might appear in terms of instructor competence, respect for student privacy, amount and depth of posted textual communications, technical help, and sense of mutual care and respect.

Trust between the faculty member and learners might lead to meaningful participation by learners, the greater expression of dissenting ideas, and a greater presence of students. Consistent and supportive interactions between faculty and learners were important in establishing this relational trust.

The importance of trust between college student peers in an online learning environment was ranked highly by faculty respondents. Trust seemed to center around the issue of respect—the avoidance of prejudice and personal attacks for others’ ideas. Another theme in faculty responses was that of peer efficacy in learning. D. Fish warned her students against excessive self-revelation: “If anything, I spend time with my students admonishing them NOT to be so trusting because they are in a public forum with people they don’t know” (March 2005, p. 2).

The trust between a student and the curriculum must manifest in the transferable nature of the course materials

to transfer universities and the real world. “I think students need to believe that the curriculum is accurate, up-to-date, and comparable to what they would encounter in a face-to-face class at an accredited institution of higher learning in the state,” wrote P. Amoss (Online instructor interview, March 2005, p. 2). In summary, student trust in the curriculum depended on where they attributed the responsibility for the creation of the study materials, the book publishing company, WashingtonOnline, a course designer, or the faculty member. Faculty emphasized the importance of maintaining open discussions and being facilitative of student questions regarding the learning. They also suggested that faculty should keep their curriculum relevant and up-to-date.

Faculty differed on their opinions about the importance of trust between students and courseware technologies. They did agree on the importance of having consistent and functioning courseware because of the need to navigate such spaces for effective learning (S. Morris, Online instructor interview, March 2005, p. 3).

When did trust solidify for the DL instructors? A majority cited Week 3 as the point when students had settled in and started forming relationships and trust ties with each other and the instructor. Another cited this as a window in which to build rapport with learners. For others, the time frame varied, depending on how quickly relationships developed. A majority of instructors indicated the time period of about three weeks to the midpoint, at which point courses seem to “settle” into a kind of experience-based trust. Instructors purposefully establish an environment on which to build mutual trust. Learners must “make a commitment not to harm each other and to treat each other respectfully even if they disagree” (P. McMahon, Online instructor interview, March 2005, p. 2). “Arguably, the most critical time frame for organizational participants to develop trust is at the beginning of their relationship” (McKnight, Cummings, & Chervany, July 1998, p. 473). This laying the groundwork might head off challenges later.

The online faculty respondents identified various elements as contributing to distrust in an online classroom. Instructor defensiveness and denial of mistakes or problems would be problematic. Their absence from the classroom, even for a day, might harm learners’ senses of trust. Several instructors made it a point to let their students know if they were to be gone even for a day—in order to maintain that sense of mutual responsibility and connectedness. “Personal attacks or prickly responses to postings that the responder takes exception to” might lead to feelings of mistrust (P. Amoss, Online instructor interview, March 2005, p. 3). “Crashing Blackboard, flaky group members, flaky discussion question responses. Lack of response from the professor. Lack of announcements from the professor,” observed J. Murphy (Online instructor interview, March 2005, p. 4).

Distrust often resulted in lingering negative effects, according to a number of online faculty, who shared various experiences with learners who were verbally abusive, combative, rude, or frustrated and “venting.” Even after the original issues had been addressed, a residual distaste for online textual communications seemed to follow. A few gave examples of situations that were redeemable. One was a case of plagiarism by a learner, who, with support by his advisor and the online instructor, was able to do his own work and earn his own grade (P. Olsen-Missildine, Online instructor interview, March 2005, p. 2).

Having a classroom revised and ready on the first day of class was one way to build trust (T. Redwine, Online instructor interview, April 2005, p. 3). According to faculty respondents, the elements that contributed most to trust included mutual respect and regard between the instructors and learners; this would include respectful discussion of controversial topics and tolerance for different ideas and personalities. They suggested that smaller class sizes would enhance trust. The depth of interpersonal exchanges (described by one as “non-shallow discussions”) and the production of high quality work by fellow learners all contribute to higher trust. Faculty demonstration of good will and flexibility such as offering late homework allowances or test retakes contributed to a greater sense of trust. A high quality of curriculum enhanced trust.

DL instructors pointed to classroom “lacks” leading to mistrust. “Lack of communication with the instructor, poorly worded instructions, unclear classroom expectations, anything that confuses or shows lack of respect for the student will cause disrespect in the student,” wrote one instructor (C. Lower, Online instructor interview, April 2005, p. 5). “Malfunctions and slow response to troubles,” wrote J.K. Erickson (Online instructor interview, April 2005, p. 3). Changes made on the “spur of the moment” might cause learner discomfort (B. Culwell, Online instructor interview, April 2005, p. 2). Poor participation by learners early in the quarter might contribute to mistrust as well, according to one respondent. Sometimes, one disgruntled student might spoil the learning experience for the others (S. Julin, Online instructor interview, April 2005, p. 3).

Half of faculty respondents suggested that the reestablishment of trust, once broken, might not be possible given the 10-week timeline of a typical quarter. Some responded that they had never had this experience before and did not want to speculate about how to reestablish trust. The faculty who believed that reestablishing trust was possible suggested a variety of methods. A dominant approach was the hyper presence and intervention of the instructor. Often, a direct face-to-face, telephone or email remedy was suggested (A. Redmon, Online instructor interview, April 2005, p. 3). Other strategies focused on re-establishing a sense of civility. Yet another described a process of winning students back. “I often make an announcement to mention a link to an

interesting article in the news just to have something to post and to try and engage the students by relating current events to the week’s topic. It’s like winning back customers after they’ve had a bad experience” (P. Ward, Online instructor interview, April 2005, p. 3).

Distance Learning Administrator Interview

- (1) How do you influence how instructors teach in the program?
- (2) How do you influence the online curriculum?
- (3) How important is trust between a **student and an instructor** in an online learning environment? Why?
- (4) How important is trust between a **student and other students** in an online learning environment? Why?
- (5) How important is trust between a **student and the curriculum** in an online learning environment? Why?
- (6) How important is trust between a **student and courseware technologies** in an online learning environment? Why?
- (7) What aspects of leadership in administration contribute to learner trust?

Distance learning administrator responses. Seven distance learning administrators linked to WAOL responded to the emailed interviews. The average number of years for working in DL for administrators surveyed was 7.79 years. One respondent had worked in this position only a year as an interim DL coordinator while others had spent upwards of 12 to 15 years in DL administration. The average sizes of their programs were 4,560 full-time students served annually and supervision of 152 full-time and adjunct faculty members. Their position titles were the following: DL coordinator, dean, director of distance learning, and instructional services managing director. Their responses follow in the order of the online interview questions. Names were cited only when the respondents gave clear permission to use them. Otherwise, comments were offered un-attributed.

In terms of how administrators influenced their DL faculty, they cited structural formal power methods: existing policy; a training course before hiring; the formal instructor review process; one-on-one discussions; the student complaint process, and an involvement in curriculum development discussions. Another focused more on the relational influences: “Share examples of best practices, mandate they take WAOL training before teaching fully online or local training before teaching Web-enhanced, review course evaluation and offer assistance when asked how to handle situations or accomplish some end” (E. Bachmann, Distance learning administrator interview, April 2005, p. 3). By contrast, one described a major effort recruiting and supporting faculty to create and teach online courses because of a culture of skepticism about the efficacy of online

learning. She cited how behind-the-scenes dissatisfactions can “sometimes be sensed by the students,” for negative program repercussions.

The types of influence by DL administrators on instructor teaching apparently depended on the stage of development of the program, individual administrative choices, and the presence of preexisting processes and structures for the teaching. There was a mix of policy-following and unique responses based on instructor and learner needs.

Distance learning (DL) administrators often focused on a comprehensive set of course offerings and let faculty focus on the more specific aspects of the particular course curriculum. Several administrators identified little to no influence on the curriculum directly. One suggested that the respective colleges themselves affected curriculum design, while another described a formal process of development that included the administration. Yet a third said that they provided access to training for instructors and conducted evaluations of them (B. Swenson, Distance learning administrator interview, March 2005, p. 2). Overall, there was a perception of “hands-off” in terms of curricular influence. No post-survey administrative respondent addressed indirect or informal influences on curriculum.

In terms of trust between the student and the instructor, the administrators concurred that this was very important. Broughton observed some negative fallout that might come from mistrust. “Students who do not trust their instructor will suspect assignments and grades. They will worry that their work is not being considered or (not) being considered fairly. They will worry that the course is not what it is supposed to be. Most interestingly, students who do not trust their instructor sometimes ask for assistance and then reject it when the instructor responds. Instructors who do not trust their students sometimes spend too much effort in trying to prevent cheating and sometimes feel the class is a failure” (C. Broughton, DL administrator interview, March 2005, p. 2). One administrator cited student work honesty and instructor competence, involvement, and caring. Another mentioned the instructor’s offering of quality information on the course topic, instructor responsiveness to learner questions, and fair means of evaluating student work. Administrators highlighted the importance of online trust between faculty and learners in broad terms.

Administrators regarded the trust between peers as of similar importance to that of face-to-face students. One respondent said that such peer relationships were critical because these were students working essentially with strangers (B. Swenson, Distance learning administrator interview, March 2005, p. 2). Overall, administrators seemed somewhat noncommittal about the importance of peer trust relationships online.

The administrators focused on pragmatic concerns in terms of the trust between learners and the curriculum. For example, M. Reisman said, “Students need to know that

the course will help them achieve their educational goal(s)” (M. Reisman, Distance learning administrator interview, March 2005, p. 2). Another emphasized student investments in their education and their expectations of their return on investment.

The administrators concurred that technological stability was the central issue between students and courseware technologies. “They expect their time and effort will not be wasted and that all the behind scene things will work,” observed K. Bates (Distance learning administrator interview, March 2005, p. 2). When students encounter technology which doesn’t work, they experience stress and may begin to avoid that classroom, Broughton said. “Users sometimes also blame the faulty technologies for any and all problems, and consequently, they might not ever address the real issues that would promote the learning experience,” said Broughton (DL administrator interview, March 2005, p. 3). Several suggested the need for backup plans to deal with potential technological challenges.

DL administrators facilitated the building of online learner trust through “clear communication, consistent management and organization, and good judgment” (M. Reisman, Distance learning administrator interview, March 2005, p. 2). K. Bates suggested that administrators should demonstrate leadership through “having right answers, being willing to listen and figure out what the student is truly needing. Insuring that all the behind the scene work is done properly” (K. Bates, Distance learning administrator interview, March 2005, p. 3). Another suggested that “competence, honesty, evidence of concern for faculty & students” were important administrative elements to support learner trust (B. Swenson, Distance learning administrator interview, March 2005, p. 2). Several administrators suggested that the parts had to work as a system. E. Bachmann wrote, “The very facets identified by these questions: that faculty are well prepared to teach, that students are equipped with success skills to learn, that technology systems are robust and support effective online instruction, and that all roles in the delivery system are clear and well supported” (E. Bachmann, Distance learning administrator interview, April 2005, p. 3).

Broughton suggested the importance of building systems that allow trust to develop. “That might be done by providing systems and processes that work and are not overly cumbersome, by providing clear and frequent and various communications to all users, by quickly and completely investigating any complaints or concerns and giving quick feedback, by trying to stay a little ahead of the curve so the program doesn’t get stuck, and by planning changes carefully,” said Broughton (DL administrator interview, March 2005, pp. 3 – 4). Administrators needed to ensure that every aspect of their programs was running efficiently to support learner trust.

R4. Is there a relationship between high-trust and the effectiveness of student online learning (as measured by the proxies of student retention/persistence, course grades, and student perceptions)?

The null hypothesis suggested that there was no linear relationship between the variables of the online Trust Number (the number extrapolated by how learners ranked their online trust experiences) and that of Student Success (the number extrapolated by student retention/persistence, course grades, and student perceptions). This simple regression with a $p < .05$ contrasted with the adjusted R Squared (.073) with a standard deviation of 2.568, and a significance figure of .000 showed that there was statistical grounds for possibly rejecting the null hypothesis with a $p < .05$ according to the ANOVA table. With a high F score of 50.620, these statistical results might be significant in showing a low positive correlation between online trust and student success, with an R of .273. The low Adjusted R Square suggested that the variation in the independent variable of the online Trust Number measure accounted for 7.3% of the variation in the dependent variable Student Success. That might be expected given the complexity of other variables that affect student academic success. That said, this finding may suggest that the role of online trust is a factor to be considered in overall learner success.

A one-tailed correlation conducted between these two elements from a sample of 630 survey respondents did not show a particularly high relationship. The direction was a positive one, but the Pearson correlation was only .273 (with a standard error of the estimate at 2.568) which is considered low (Best & Kahn, 1986, p. 240; Rowntree, 1981, p. 170; Fraenkel & Wallen, 2000, p. 273, as cited by Hutton, Feb. 6, 2003). Yet, with a large enough sample size, a lower correlation might show a weak relationship which may be significant (*Statview Reference*, p. 44).

To elaborate further, the mean Trust Number score was 5.794 or rounded up to "Agree" in terms of the averages of the factors comprising online trust, with a standard deviation of .6642 or a variance of .441. The 95% confidence interval for the mean was lower bounded at 5.742 and upper bounded at 5.846. The Student Success curve, placed in ascending order shows a gradual ascension without apparent sharp adjustments. An overwhelming majority of respondents (85%) suggested that they would take WAOL classes again, with 14% suggesting that they wouldn't. In terms of what grades learners expected from the particular WAOL course they addressed in the survey, 65% expected an A, 27% a B, and 6% a C. None of the respondents expected a D or an F.

In short, the research seemed to show a slight relationship between learners' trust levels and the success as measured by the proxies of student retention, course grades, and student attitudes. However, the trust factor seemed to only play a small role and was one of a number of potential factors affecting student success.

R5. How can trust as an asset be protected and leveraged in a virtual learning environment?

Social engineer online classrooms. In terms of "social engineering" for online classrooms, this study suggested the purposive building of rational and humanistic online learning cultures and environments. It might mean better mitigations and remedial actions for non-purposive low-trust effects (also known as "negative events," according to Fairholm, 1994, p. 138) and environments. The online learning culture might be created, modified, and enhanced. Figuring out how to enhance trust might help distance education overcome one of its biggest hurdles, that of the virtuality (Anson, Jan. 1999, p. 273).

Communicate constantly. The quality/substance, timeliness, and appropriateness of textual communications appeared to be critical for online trust. Instructors might want to pay special attention to their students' postings and respond to them in a timely and appropriate fashion. Queries might be answered rather than be left dangling, and regular monitoring of the online classroom would be helpful in offering timely insights. Learners should also be given clear directions regarding the expectations of their postings—in terms of quality, length, number, and timeliness.

Manage instructor image. Instructors might consider what they're communicating in terms of their posted biographies, in terms of how unique and individualistic these are. Instructors might consciously convey their ethics (spoken and unspoken) through their online behaviors (timeliness, follow-through, sense of grading fairness, and closeness in following policies) and textual messages as in Kasper-Fuehrer and Ashkanasy's "Communication of Trustworthiness" (2001, pp. 235 – 255). More exploration might be conducted on the concept of telepresence and methods of effective communications in online spaces. The concept of "telepresence" has salience in high-interactivity instructor-led college online classrooms. The origination of a digital presence may stem from the senses of self of the learners and instructor. "Media richness" may enhance telepresence, by focusing on "the characteristics of rapid feedback, language variety, personalization, and multiple cues. The greater the ability of a medium to provide for those characteristics, the richer the medium is. Face-to-face interaction is considered the richest medium of all, an ideal that has persisted in the minds of many technology designers" (Zigurs, 2003, p. 346).

Create oversight organization presence for learners. The various cultures and interests of the home community colleges, WashingtonOnline (WAOL) and the respective fields of studies for learners should be emphasized in the online classroom. Foremost of value would be the local colleges' presence for learners, as survey respondents highlighted the importance of that organization's integrity, professionalism and reputation to their online trust. Researchers might pursue the culture-building and sense-

making in online learning organizations to surface espoused theories and actual practices (Hai-Jew, WashingtonOnline Virtual Campus..., Aug. 2004, n.p). They might explore how sense is made at the line-level by learners who may/may not be privy to the inner workings of the organization.

Support peer-to-peer mutual dependence. Peer-to-peer relations might be encouraged through work projects that demanded "mutual dependence," as that factor has been linked to the development of trust. Negative team experiences should be avoided, so teams might be set up with some pre-work to encourage constructive virtual teaming behaviors. Learners may be encouraged to post messages in a timely and substantive fashion, in order to more consciously build their own reputations and trustworthiness for peers. Reciprocity has been identified as a foundation for relationship building and potential trust (Levine, 2003, p. 66).

Define policies and adhere to them. Policies should be clearly defined in online classrooms, and instructors should strictly adhere to these. Learners seemed to conflate an instructor's ethics with how closely they support course policies.

Empower learners in decision-making and communications. Student empowerment is an assumed part of andragogy and constructivism, crucial underlying theories behind distance learning. "The teacher-student relationship brings together two populations of unequal culture; there is no question of equality or informality in the relations between the two," wrote Boocock (Winter, 1973, p. 17). On the formal level, there may be large power disparities, and this situation may be enhanced or mitigated by informal power roles. This empowerment may be achieved through the inclusion and valuing of every learner in course-work and communications. Extending more decision-making to learners might be helpful. Based on Geis' paper, how much "student choice" is there based on the eight factors: pacing, reinforcers, contingencies, sequencing, mode, feedback, content and objectives, and discriminative control (Geis, May-June 1976, pp. 249 - 273).

Update curriculum and ensure its comprehensiveness. Curriculum development was raised as a crucial issue by survey respondents –particularly the comprehensiveness of the course materials, the clear definition of work assignments, the college-level quality of the study materials, and the timeliness of the materials. Instructors, particularly lead ones, should take into consideration the polysemic nature of written directions and enhance reader understanding through clear writing, the posting of examples, and other methods. Curriculum should be regularly updated for "fit" with the field and contemporariness, where applicable. Brown and Duguid emphasized the importance of context in offering information (2000, pp. 1 - 2). Curricular concerns might address the realism of expressed academic goals, the comprehensiveness and timeliness of the course materials, the faculty member's personalized input

into the curricular learning, and other factors. One central aspect to explore in the curriculum may be whether there are embedded cultural biases. Palloff and Pratt note that researcher Joo (1999) identified cultural issues coming into play in content, multi-media, writing styles, writing structures, Web design, and even the role of the student and instructor (Palloff & Pratt, 2003, p. 40).

Support 24/7 technologies. Technology courseware platforms should be stable and accepting of various types of software. Providing a 24/7 service in-house might be a critical aspect of building trust in technologies for online learning. The technological proficiency of learners has been shown to be a pre-requisite of many online courses, so screening for and requiring such proficiencies may support online student trust. Technological innovations may simplify the human interface aspect of online learning and ease the discomfort of keyboarding messages. Courseware may continue to improve in terms of user accessibility, visual clarity, built-in interactivity (such as the use of interactive student lounges for both real-time and asynchronous interactions), professional simulation, and other innovations.

Conclusion

Trust should not be over-simplified as uni-dimensional in how it is perceived in an online classroom. This research on how trust manifests in online classrooms contributes a small piece to further understanding of online learners' experiences in fully Web-based instructor-led high-interactivity college classrooms. Further research may elaborate on the construct of online trust in an ever more virtual realm of work, study, and inter-communications.

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