Promoting and evaluating online learner-instructor relationships

Yanghee Kim, Utah State University
R Burdo
T Chen

Available at: https://works.bepress.com/yanghee_kim/56/
Promoting and evaluating online learner-instructor relationships
Promoting and Evaluating Online Learner-Instructor Relationships

Abstract

Emotions that a learner brings to the learning context can influence engagement, self-regulation, and achievement. Recently, researchers have called for examination on the impact of learner emotions in online learning environments. This study examines how to incorporate learner/instructor relationship aspects in online instruction and promote affective relationships with the learners. Participants enrolled in a college statistics course took a weeklong video-based module covering Normal Distribution. Learner attitudes, learner self-efficacy, learner/instructor relationship, and learning gains were evaluated. The relationship building strategies were found to have positive impacts on learner attitudes and self-efficacy. The inclusion of the relationship building strategies, however, did not influence the learners’ perceptions of the online instructor nor learning gains.

Promoting and Evaluating Online Learner-Instructor Relationships

Purpose

The purpose of this study was to examine how we could incorporate interpersonal relationship aspects in online instruction and promote more affective relationships with the learners. The guiding question was if the effective strategies for promoting a learner-instructor relationship in classrooms (Micari & Pazos, 2012) could be consistently applied to online learning environments. The specific research questions are as follows: 1) Will the strategies influence students’ positive attitudes toward learning the subject matter (college-level introductory statistics)? 2) Will the strategies influence students’ self-efficacy in learning? 3) Will the strategies promote a positive learner-instructor relationship? and 4) Will the strategies promote students’ learning gains?

Backgrounds

The emotions that a learner brings to the learning context can positively or negatively influence engagement, self-regulation, and achievement (Linnenbrink-Garcia & Pekrun, 2011). According to Pekrun's (2006) control-value theory, achievement emotions (e.g. frustration and enjoyment) impact learner’s cognitive appraisals of their capability to control their achievement and of the relevant important of such success. A social and affective relationship between the learner and the instructor can assist in promoting positive emotions and diminishing negative ones (Angelaki & Mavroidis, 2013; Sakiz, 2012). Learner-instructor relationships positively relate to a learner’s engagement and subsequently their achievement (Christensen & Menzel, 1998; Micari & Pazos, 2012; Sakiz, 2012).

Researchers have called for examination on the impact of learner emotions in online learning environments (Artino Jr. & Jones II, 2012; Daniels & Stupnisky, 2012; Marchand &
Gutierrez, 2012). Though continually growing at all educational levels, online learning brings with it unique challenges that stem from the lack of interpersonal relationships between the instructor and the learner and interfere with the success in online learning (Kim, 2012; Muilenburg & Berge, 2005). With this growth, it would be important and timely to examine how the learner-instructor relationship could be maintained and promoted in online learning (Angelaki & Mavroidis, 2013).

**Methods**

**Intervention: An Online Video-Based Learning Module**

A weeklong video-based module was developed in collaboration with the course instructor, consisting of four lessons on Normal Distribution. In the lessons, the voice-over instructor named Chris explained the concepts and procedures, and animated lecture slides were presented along with Chris’s explanations. We used another persona in Chris, to control for the confounding by the instructor of the regular face-to-face class.

**Participants**

Participants were 66 college students who enrolled in a required introductory statistics course offered face-to-face for general education credits. Participation in the online module was mandatory and replaced the classroom lecture. During the online-module week, 32 students completed the posttest on learner affect (attitudes and self-efficacy) whereas 20 students completed all four lessons and the posttest on learning. The majority of participants were upperclassmen, female (over two-thirds), and majoring in social science and humanities.

**Independent Variable**

The independent variable was treatment with two levels: Relationship Building (RB) vs. Control. The Control condition presented the voice-over lecture that contained the information
about the curricular topic. In RB, we incorporated three strategies that were proven to promote positive learner-instructor relationships in face-to-face settings into Chris’ lecture (Micari & Pazos, 2012; Young, 2006), in addition to this curricular lecture. First, we used colloquialisms throughout the lessons. Second, the instructor Chris provided anecdotes about his own experience with statistics. Third, following questions, Chris provided motivational encouragement. At login to the module, participants were randomly assigned to either condition.

**Dependent Measures**

The four dependent measures were learner attitudes, learner self-efficacy, learner-instructor relationship, and learning. Learner attitudes were defined as learners’ overall evaluative responses to learning the online module (Petty, DeSteno, & Rucker, 2001). The measure of learner attitudes consisted of four questions rated on a seven-point Likert scale, ranging from one being “Strongly Disagree” to seven being a “Strongly Agree.” The item reliability was moderately strong at $\alpha = .76$. Learner self-efficacy was defined as learners’ beliefs in their capability to successfully learn the online module (Bandura, 1997). Following Bandura’s guidelines (2006), the measure of learner self-efficacy consisted of four questions rated on a seven-point Likert scale. The item reliability was strong at $\alpha = .84$. Learner-instructor relationship was defined as learners’ evaluations of the instructor (Komarraju, Musulkin, & Bhattacharya, 2010). Two near-identical versions of the relationship questionnaire were modified from Micari & Pazos's study (2012). Both versions consisted of eight items that were rated on a 7-point Likert scale. The item reliability was strong at $\alpha = .98$. Learning was measured with a paper-based test implemented in regular face-to-face class shortly before and the following week after the intervention. The test included ten items on recall and application in a short-answer format. An instructor who taught another section of the same course graded the test scores,
which were verified by the face-to-face instructor. The increase from pretest to posttest was used to analyze students’ learning gains. The maximum possible score on the learning test was 17 points and students had 15 minutes to finish each test.

**Procedures**

Learners completed the pretest to assess their prior knowledge of the normal curve before beginning the online module. During the intervention week, learners logged in to the website that hosted the lesson module. At login, they typed in their demographic information and completed the attitudes and self-efficacy questionnaires. Learners followed through the lessons, one lesson per day (with no lesson on Wednesday). Immediately following each online lesson, they completed the questionnaire on learner-instructor relationship. At the end of the last lesson, learners completed the attitudes and self-efficacy questionnaires. During the class the week following the intervention, learners completed a paper-based posttest to assess their learning.

**Results**

**Learner Attitudes**

The repeated measures ANOVA revealed a significant effect of the strategies use on learners’ attitudes toward the topic, $F(1, 30) = 5.32, p = .028, \eta^2 = .15$. From the pretest to the posttest, learners in the control condition without using the strategies showed a significant decrease in attitudes whereas learners in the RB condition remained nearly constant.

**Learner Self-Efficacy**

The repeated measures ANOVA revealed a significant effect of the strategies use on self-efficacy, $F(1, 30) = 5.02, p = .03, \eta^2 = .14$. From the pretest to posttest, learners in the control condition showed a significant decrease in self-efficacy whereas learners in the RB condition remained nearly constant.
Learner-Instructor Relationship

The data set of the learner-instructor relationship violated the sphericity assumption, so we used the Greenhouse-Geisser correction. The results did not reveal a significant effect of the strategies use on the learner-instructor relationship, \( F(2, 36) = 0.83, p = .45, \eta^2 = .04 \).

Learners in both conditions evaluated the online instructor less positively as the lessons progressed, which indicated a weakening online learner-instructor relationship over time.

Learning Gains

The repeated measures ANOVA of the learning outcomes did not reveal a significant effect of the strategies on learning gains \( F(1, 16) = .56, p = .466, \eta^2 = .04 \). Rather, the learners significantly increased their learning after the weeklong online module, regardless of the strategies use, \( F(1, 16) = 63.85, p < .001, \eta^2 = .81 \). Table 1 presents descriptive statistics of the dependent measures for pretest and posttest comparisons.

Table 1
Means (M) and standard deviations (SD) of the measures

<table>
<thead>
<tr>
<th>Measures</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Attitudes*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relation Building (RB) (n= 21)</td>
<td>16.00</td>
<td>4.74</td>
</tr>
<tr>
<td>Control (n= 11)</td>
<td>19.45</td>
<td>3.39</td>
</tr>
<tr>
<td>Total (n= 32)</td>
<td>17.19</td>
<td>4.58</td>
</tr>
<tr>
<td>Self efficacy*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RB (n= 21)</td>
<td>19.29</td>
<td>6.26</td>
</tr>
<tr>
<td>Control (n= 11)</td>
<td>23.73</td>
<td>3.98</td>
</tr>
<tr>
<td>Total (n= 32)</td>
<td>20.81</td>
<td>5.92</td>
</tr>
<tr>
<td>Learning gains**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RB (n= 9)</td>
<td>1.44</td>
<td>1.13</td>
</tr>
<tr>
<td>Control (n= 8)</td>
<td>1.13</td>
<td>0.84</td>
</tr>
<tr>
<td>Total (n= 17)</td>
<td>1.29</td>
<td>0.99</td>
</tr>
<tr>
<td>Learner-Instructor Relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 1</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>RB (n= 11)</td>
<td>38.82</td>
<td>7.37</td>
</tr>
<tr>
<td>Control (n= 9)</td>
<td>36.00</td>
<td>11.97</td>
</tr>
<tr>
<td>Total (n= 20)</td>
<td>37.55</td>
<td>9.54</td>
</tr>
</tbody>
</table>

*p < .05, ** p < .01
Discussion

In this study, we implemented the effective learner-instructor relationship-building strategies in our weeklong, online video-based lessons. The results supported the effectiveness of the strategies on learner attitudes toward and self-efficacy in learning the topic, but neither on the evaluations of the instructor nor on learning gains.

The Positive Impact on Learner Affect

The relationship building strategies had positive impacts on learner attitudes and also on their self-efficacy. When the voice-over instructor included social and encouraging messages in its lecture, the college students showed significantly more positive attitudes toward learning the statistics concepts and significantly higher self-efficacy than when the instructor did not include the messages. The results confirmed the literature in online education highlighting the importance of social and affective accounts in online instruction (e.g., Muilenburg and Berge, 2005).

Limited Impacts on Online Learner-Instructor Relationship and Learning Gains

The inclusion of the relationship building strategies, however, did not influence the learners’ perceptions of the online instructor, seemingly not contributing to the positive relationship building. Some conjecture can be made as reasons for this limited impact. First, the presumably positive relationship that learners had had with their face-to-face instructor might have influenced their initial evaluations to the online instructor, which as the week progressed, the evaluations decreased. This seemed to reflect the difference in students’ learning experiences between online and face-to-face instruction, regardless of the use of the strategies. Second, since the participants were drawn from a face-to-face course to participate in an online module, they may have had differing perspectives of online learning than learners who choose to enroll in
online courses. The learners may have not been interested in developing rapport with an online instructor just for the week. Third, due to the design of the module, the relationship between the learner and instructor was fundamentally limited. The presence of and communication with the instructor are essential, yet the limited duration and asynchronous delivery of the module did not afford communication with the instructor (Young, 2006). Lastly, the measure designed to assess the learners’ evaluations of the learner-instructor relationship could be validated rigorously. We used the modified learner-instructor relationship questionnaire in conventional classroom (Micari & Pazos, 2012). The validity of the measure in online instruction could be examined more thoroughly.

It sounded natural that the strategies did not influence learning gains, in that learner-instructor relationships in a face-to-face setting do have a positive influence on academics (Christensen & Menzel, 1998; Sakiz, 2012). Still, it might be premature to conclude with the weak impact of the strategies in online instruction. In the current study, we applied only the strategies we had deemed appropriate to video-based online instruction. Subsequent research may experiment the extended use of the relationship building strategies, which applies advanced communications technology.

**Scholarly Significance**

In conclusion, as indicated in the rapid growth in massive open online courses (MOOCs), online instruction can offer many affordances to learners, otherwise not possible in classrooms. With more economical implementation and flexible scheduling, online learning has been assisting many non-traditional students as well as students on college campus. The present study revealed that, even when the communication between the instructor and learner was limited, the students’ attitudes and self-efficacy were significantly higher when the voice-over instructor
provided meaningful examples, encouraging messages, and demonstrating concern about the students’ understanding. This suggests insights to many MOOC instructors that better design their video lectures with affective encouragement as well as content information.
References


