International Journal of Business, Human and Social Sciences
ISSN: 2517-9411
Vol:15, No:4, 2021

The Effectiveness of Lesson Study via Learning Communities in Increasing Instructional Self-Efficacy of Beginning Special Educators

David D. Hampton

***Abstract*—**Lesson study is used as an instructional technique to promote both student and faculty learning. However, little is known about the usefulness of learning communities in supporting results of lesson study on the self-efficacy and development for tenure-track faculty. This study investigated the impact of participation in a lesson study learning community on 34 new faculty members at a mid-size Midwestern University, specifically regarding implementing lesson study evaluations by new faculty on their reported self-efficacy. Results indicate that participation in a lesson study learning community significantly increased faculty members' lesson study self-efficacy as well as grant and manuscript production over one academic year. Suggestions for future lesson study around faculty learning communities are discussed.

***Keywords*—**Lesson study, learning community, lesson study self-efficacy, new faculty.

I. Introduction

LEARNING communities have been used to promote learning, skill development, collegiality, and other aspects for both student and faculty growth in academia for years. These learning communities can be structured many ways for a variety of purposes ranging from lesson study development in students, to teaching development in faculty, to a multidisciplinary approach to undergraduate learning. While much information is known about learning communities developed for student learning, less is understood about how academic faculty can and should benefit from them, particularly when learning communities are focused on lesson study development. Research suggests as more and more colleges and universities incorporate learning communities into their curricula, faculty development becomes an increasingly important aspect for their success [1]. However, learning communities across the nation are underinvesting in faculty development. Two aspects are clear, learning communities are becoming increasingly common in student and faculty learning environments, and faculty development is an important component to the academic success of students, but also career success for faculty. As such, the current study aims to add to the understanding of the utility of faculty learning communities, specifically one that targets lesson study development [2].

David Hampton is with the Bowling Green State University, United States (e-mail: hamptod@bgsu.edu).

Student-Focused Learning Communities

Learning communities are often used as a template for cohort learning in undergraduate study. This interdisciplinary approach to learning at universities across the country often brings together various courses to meet educational objectives in a multidisciplinary style. Reference [3] states, "learning communities provide the most effective structure of fostering student success" (p.21). A typical student learning community experience lasts one semester and features three to four thematically linked courses that are scheduled together in one group [4].

Well-designed learning communities emphasize collaborative learning and result in improved GPA, retention, and satisfaction for undergraduate students [2], [3]. Various studies have found multiple overall benefits that include increasing retention and academic success for students [4], [5]. Other benefits include the notion that learning communities can foster solutions to common concerns, create community for members, and empower learning community members, and assist facilitators [6], [10]. Additionally, learning communities are not limited to application with college students. David [7] found that learning communities instituted in high schools created a more positive relationship among both students and teachers.

Dodge and Kendall [3] note eight benefits of learning communities for undergraduate students including, learning how to work together with other members of team, discovering the interrelationship of ideas and concepts, and reinforcing skill development through student mentorship. Through participation in learning communities, students saw an increase in their ability to do the following: problem solve, obtain workforce skills, increase communication skills, and increase interpersonal skills [3]. Additionally, the university benefited as student retention levels increased over time. A similar initiative at another university found that involvement of undergraduate students in a learning community "helped more students to understand lesson study as an important dimension of higher learning and has encouraged their active involvement in the lesson study process" [4, p.20].

Lesson Study Self-Efficacy

Self-efficacy is a person's belief in his or her ability to perform a certain task. Specifically, a lesson study's self-efficacy (SE) is the extent to which an individual is confident about, or believes he or she is capable of, carrying out different lesson study tasks associated with lesson study

including library lesson study, designing studies, and implementing lesson study projects [5]. Because self-efficacy is hypothesized to be the most significant determinant of human behavior and influence whether a given task is attempted and how much effort is expended on that specific task [13]. Lesson study self-efficacy has become an important focal point in the lesson study training literature over the years. This increase in focus is not surprising given that lesson study self-efficacy has been shown to relate positively not only to increased lesson study productivity, but also an interest in lesson study [15], [16].

Learning, specifically designed to facilitate lesson study self-efficacy, has the potential to increase graduate student training practices and mentoring. Additionally, measuring a student's sense of lesson study self-efficacy has implications for career guidance, mentoring, and educational interventions with graduate students and professionals [17]-[19]. Another study of lesson study self-efficacy found an increase in graduate students' confidence in their ability to complete specific lesson study activities. This increase in confidence may be attributed to the fact that the classes in this study had less emphasis on faculty-centered lecturing and more emphasis on discussion and small group interactions [19].

Lesson Study Self-Efficacy and Learning Communities

Various studies have been conducted to investigate what variables impact student SE. Some of these variables include active learning, student relationships with faculty [4], student relationships with others on the lesson study team, and mentorship [4], [10], [12]-[14].

Researchers investigated the effects of a progressive new learning community on student SE. Incoming undergraduate university students from various majors could engage in lesson study as early as their first semester on campus by electing to join an undergraduate lesson study learning community (LC). The LC was composed of actively lesson studying faculty who elected to work closely with one or two students. The study found that student involvement in hands-on activities and close relationships with faculty contributed to the students' sense of SE, intellectual growth, improved integrative and critical thinking abilities, increased career exploration, and confidence building [4], [12].

II. Method

Participants

Eligible participants were new faculty hired to begin in a teaching position in the fall of 2019. 109 new faculty were hired to begin at this time. Due to the high number of hires, 922 new special educators, a LC was developed to promote lesson study and grant development through group meetings and formal mentorship. 21 of the newly hired faculty enrolled to participate in this year-long community. Additionally, eight faculties who were hired within the last two to three academic years participated as new special educators. 20 tenured special educators participated in the role of faculty mentors. In total, 49 faculties participated in the LC. The LC commanded several stipulations of completion for all participants to receive the professional development funding at the end of the academic year. Of the original 49 faculty who began the LC, 42 met all the stipulations of completion by 26 new faculty hired within the last three years, and 16 senior mentors.

This study was designed to assess the LC's effectiveness in impacting the members' lesson study self-efficacy, so all participants were solicited via email in August of 2019 and April of 2020 to assess pre- and post-study information. Additionally, participants were separated out by participation in the LC so that data could be compared between the groups at both pre- and post-collection. Participants were able to participate in either or both the pre- and post-data collection; as such, three sets of demographic information will be reported.

TABLE I
TOTAL PARTICIPANT DEMOGRAPHIC DATA

	Pre-test #/%	Post-test #/%	Total #/%
Member of learning community			
Yes	14/39	20/43	34/41
No	22/61	27/57	49/59
Number of published manuscripts			
0-1	15/42	11/23	26/31
2-4	9/25	14/30	23/28
5+	12/33	21/45	33/40
Number of grants applied for			
0-1	23/64	17/36	40/48
2-4	10/28	23/49	33/40
5+	3/8	7/15	10/12
Number of grants received			
0-1	27/75	34/72	61/73
2-4	7/19	11/23	18/22
5+	2/6	2/4	4/5
Number of years taught at college level			
0-1	20/56	17/36	37/45
2-4	8/22	18/38	26/31
5+	8/22	12/26	20/24
Level of highest degree			
Master's degree	11/31	10/21	21/25
Doctoral degree	25/69	37/79	62/75
State/country in which degree was received			
United States	35/97	46/98	81/98
International	1/3	1/2	2/2
Gender			
Male	15/42	16/34	3137
Female	19/53	31/66	50/60
Ethnicity			
White/Caucasian	24/67	35/74	59/71
Hispanic	1/3	2/4	3/4
Asian/Asian American	2/6	3/6	5/6
African American	2/6	1/2	3/4
Unknown	7/19	6/13	13/19

*all percentages were rounded to nearest whole value. Total Participant Demographic Data (N = 83; n = 36, pre-test; n = 47, post-test).

A total volunteer sample of 83 total participants (49 not in the learning community, 34 in the learning community) was obtained. At the pre-test, a sample of 36 participants 22 not in

the LC, 14 in the LC was obtained and at the post-test, a sample of 47 participants (27 not in the learning community, 20 in the learning community) was obtained. All participant demographic data can be found in Table I.

III. Materials

Demographic Questionnaire

A questionnaire was developed to obtain participant demographic information including race/ethnicity, gender, membership in the learning community, highest level of earned degree, state or country in which degree was earned, area of degree, years of college-level teaching prior to coming to current university, and how many grants and manuscripts both applied for and received.

Lesson Study Self-Efficacy Scale

The *Lesson Study Self –Efficacy Scale* (SES) was utilized to measure lesson study self-efficacy in new faculty [19]. The SES lists 51 lesson study tasks. Respondents rate their confidence in their ability to perform each task on a 100-point scale, with 100 being completely confident, 50 being moderately confident and zero being not confident in the ability to perform the task. The four subscales are as follows: *Early Tasks, Conceptualization, Implementation* and *Presenting Results*.

The *Early Tasks* subscale focuses on tasks completed prior to implementing the lesson study. This includes such tasks as completing a literature review, following ethical guidelines, and formulating lesson study questions. The *Conceptualization* subscale includes tasks as evaluating the importance of journal articles in relation to the study, consulting with colleagues, and formulating an appropriate experimental design. The *Implementation* subscale includes tasks completed when implementing a study, such as confidence in working independently, data collection, obtaining lesson study participants and implementing experimental procedures. The *Presenting Results* subscale involves tasks required to submit the manuscript, such as synthesizing results, identifying limits of the study and presenting findings to peers. Finally, the *Grant* subscale, added by the authors of this study, focused on participants' perceived ability to complete tasks such as finding grants, applying for grants, and overseeing funded grants.

SES technical manual reported a high internal consistency coefficient for the total SES (0.96) and moderate to high coefficients for each of the four subscales (ranging from 0.75 to 0.96) and a factor analysis of the SES. 57% of the variance was accounted for by a four-factor structure (*Early Tasks*, *Conceptualization*, *Implementation*, and *Presenting the Results*). Further, the study found that three subscales (*Early Tasks, Conceptualization*, and *Implementation*) accounted for unique variance in the prediction of interest in lesson study involvement. Validity of the SES total score has been supported by a 0.33 correlation with a measure of lesson study interest among graduates [19].

To specifically address self-efficacy, these questions, include: (1) how confident are you in identifying and seeking funding to run a study; (2) how confident are you in knowing various grant agencies or providers; (3) how confident are you that you can identify grant monies to fund your lesson study ideas; (4) how confident are you that you can complete grant applications; (5) how confident are you that you can manage a grant once received? These questions comprised a final *Grant* subscale designed by the lesson study participants. In the current study, the Cronbach's alpha of the total sample for this subscale was found to be 0.90.

Procedures

Participation in the learning community was voluntary and marked by several requirements. One requirement was the attendance of two-hour long meetings once a month where various scholarly activities were addressed. Topics included university grant procedures, grant searches, and faculty presentations of current lesson study for collaboration and feedback purposed. A second requirement was a completed grant submission. A third requirement was a professional presentation of lesson study material, either at a LC monthly meeting or a professional conference during the academic year. Additionally, the LC participants were paired with a tenured faculty for mentoring. Participants who completed all the requirements were provided $1,500 of professional development money.

Analysis

As a descriptive study, analyses included frequency data and independent samples *t*-tests. A pre/post survey design was used to collect the quantitative data. Dependent variables included the *Lesson Study Self-Efficacy Scale*. Independent variables included involvement in the LC. The quantitative data were analyzed by frequencies to analyze the demographic variables. Independent sample *t*-tests were completed to study the differences both within the groups at pre- and post-test as well as within the groups at pre- and post-test.

Results

Descriptive statistics were calculated and independent-samples *t*-tests were conducted to compare between-groups as well as within-group differences between the six domains presented to the new faculty during pre-post-survey administrations. Of interest was whether the LC group differed significantly compared to the NLC group in their responses to the pre- and post- survey. Additionally, it was of primary interest to compare the responses of the pre- and post-surveys for significant differences on the six domains presented to the new faculty within the LC and Non-NLC groups. Internal consistency of the six domains within the survey was analyzed using Cronbach's alpha.

Pre-Test Differences between Groups

Analysis was completed to compare the pretest survey differences between the LC and NLC in the six domains (*Early Task*, ET; *Conceptualization*, C; *Implementation*, I, *Presenting Results*, PR; *Grants*, G, and *Overall Measure*, O). Significant results were present in the *Grants* domain, with

members of the LC reporting more confidence in the grant writing process, than NLC, $t(45) = -2.62$, $p < 0.01$, $ES = 0.35$. There were no statistically significant differences present in the remaining domains. Results of the pre-test are presented in Table II.

Post-Test Differences between Groups

Analysis was completed to compare the post-test survey differences between the LC and NLC in the six domains. There were no statistically significant differences present in the domains. Results of the pretest are presented in Table III.

Pre- and Post-Test Differences within Groups

Analyses were completed to compare the pretest survey with the posttest differences within the LC and NLC in the six domains (ET, C, I, PR, G, O). For the NLC group, there were no statistically significant changes between the pre- and post-test survey. Results are presented in Table V. When comparing the pre- and post-test survey of the LC group, there were statistically significant results within five of the domains with participants reporting an increase in perceived self-efficacy in those domains from the pre-test survey. In the C domain, $t(40) = 2.66$, $p < 0.01$, $ES = 0.38$. The I domain, $t(40) = 2.63$, $p < 0.01$, $ES = 0.38$. In the PR domain, $t(40) = 2.82$, $p < 0.01$, $ES = 0.40$. In the G domain, $t(40) = 4.00$, $p < 0.000$, $ES = 0.53$. In the O domain, $t(40) = 2.79$, $p < 0.001$, $ES = 0.39$. There were no statistically significant differences reported in the ET domain, $t(40) = 1.46$, $p < 0.15$. Results of the Non-LC group and for the LC group are presented in Table V.

TABLE II
PRE-TEST GROUP DIFFERENCES FOR NEW FACULTY COMPETENCE DOMAINS BETWEEN GROUPS THAT WERE OR WERE NOT NLC

	NLC		LC					
Domain	M	SD	M	SD	*t*(45)	*p*	Cohen's *d*	Effect Size
Early Task	87.62	12.93	89.53	11.46	-0.538	0.593	-0.156	-0.078
Conceptualization	83.94	17.18	87.00	13.51	-0.683	0.509	-0.198	-0.099
Implementation	69.90	22.63	81.84	14.59	-2.186	0.034*	-0.627	-0.300
Presenting Results	85.89	13.60	87.98	13.62	-0.525	0.603	-0.154	-0.077
Grants	59.14	25.27	74.83	15.35	-2.622	0.012*	-0.750	-0.351
Overall	74.13	17.32	82.93	12.94	-1.991	0.053	-0.576	-0.277

Non-LC (n = 22); LC (n = 14), *p<.05

TABLE III
POST-TEST GROUP DIFFERENCES FOR NEW FACULTY COMPETENCE DOMAINS BETWEEN GROUPS THAT WERE OR WERE NOT MEMBERS OF A LC

	NLC		LC					
Domain	M	SD	M	SD	*t*(42)	*p*	Cohen's *d*	Effect Size
Early Task	86.48	13.20	82.78	16.22	0.833	0.409	0.250	0.124
Conceptualization	78.01	14.32	77.96	13.54	0.012	0.990	0.004	0.002
Implementation	72.94	18.27	70.44	19.58	0.438	0.664	0.132	0.066
Presenting Results	80.78	14.61	74.89	21.84	1.051	0.300	-0.221	-0.110
Grants	47.98	21.75	45.90	28.24	0.275	0.785	0.083	0.041
Overall	66.74	18.13	65.02	26.74	0.251	0.803	0.075	0.038

Non-LC (n = 27); LC (n = 20)

TABLE IV
PRE/POST DIFFERENCES FOR NEW FACULTY COMPETENCE DOMAINS FOR NLC

	Pre		Post					
Domain	M	SD	M	SD	*t*(40)	*p*	Cohen's *d*	Effect Size
Early Task	83.94	17.18	78.01	14.32	1.304	0.199	0.375	0.184
Conceptualization	69.90	22.64	72.94	18.27	-0.512	0.611	-0.148	-0.074
Implementation	86.86	12.96	80.78	14.61	-0.170	0.129	0.426	0.208
Presenting Results	59.15	25.27	47.98	21.75	0.275	0.106	0.474	0.231
Grants	74.13	17.32	66.74	18.13	0.689	0.151	0.417	0.204
Overall	79.24	17.14	68.25	17.89	0.613	0.198	0.627	0.298

Non-LC (n = 49)

TABLE V
PRE/POST DIFFERENCES FOR NEW FACULTY COMPETENCE DOMAINS FOR MEMBERS OF LC

	Pre		Post					
Domain	M	SD	M	SD	*t*(40)	*p*	Cohen's *d*	Effect Size
Early Task	89.48	11.75	83.14	15.92	1.456	0.153	0.453	0.221
Conceptualization	88.15	12.77	77.32	13.54	2.658	0.011*	0.822	0.381
Implementation	83.31	13.28	69.62	19.49	2.632	0.012*	0.821	0.380
Presenting Results	89.05	12.92	70.70	26.35	2.819	0.007*	0.884	0.404
Grants	75.22	15.64	46.86	27.92	4.004	0.000*	1.253	0.531
Overall	83.20	13.21	65.59	26.23	2.785	0.009*	0.848	0.390

LC (n = 34), *p < .05

Finally, analyses were completed to determine the internal consistency of the survey within each of the six domains. Cronbach's alpha analyses suggest that five of the domains had strong internal consistency, with the O domain suggesting a moderate internal consistency. The coefficient alpha scores are as follows: *Early Task* subscale, 0.82; *Conceptualization* subscale, 0.92; *Implementation* subscale, 0.93; *Presenting Results* subscale, 0.93; *Grants* subscale, 0.90, and *Overall Measure*, 0.60.

IV. Discussion

Lesson study has supported the use of learning communities to increase scholarly production, interest in lesson study, self-confidence and self-efficacy in students and faculty [3]-[5], [11]-[15]. Additionally, learning communities focused on teaching have been found to increase faculty self-confidence in their abilities to teach and be effective in the classroom the current study's findings add to the pool of literature showing that learning communities have a positive impact on the faculty involved within them.

The results of this study indicate that faculty who participated in the LC significantly increased their sense of lesson study self-efficacy in five out of six lesson study self-efficacy domains, as measured by the SES. These five domains were *Conceptualization Implementation*, *Presenting Results*, *Grants*, and *Overall Self-Efficacy*. The lesson study skills that showed a significant increase after participant in the LC include tasks such as: formulating an appropriate experimental design, confidence in working independently on lesson study, data collection, implementing experimental procedures, identifying limits of a study. Improved grant related skills include perceived ability to both find and apply for grants and oversee funded grants.

Finally, findings indicate an increase in grant procurement and grant applications among faculty. Lesson study participants in the LC increased manuscript production from 64 total articles before the learning community to 261 after the LC was completed, at the end of the academic year, equaling an increase of 197 articles. Study participants who did not participate in the LC increased manuscript production from 93 total articles at the start of the academic year to 102 at the end of the academic year, equaling an increase of just nine new articles. Additionally, the college saw a net gain of external grant submissions between the year prior to the learning community and the year in which the learning community took place of 17% with an increase of 83% of awarded grants. This quantitative comparison alone provides a supporting argument that the LC promoted scholarly activity.

The one domain that did not show a significant increase was the *Early Task* domain. This lack of increase potentially occurred because the skills of the *Early Task* domain include skills that may have been focused heavily on during doctoral programs so new faculty may feel already confident in being able to complete them. These include tasks implemented prior to completing an actual lesson study such as writing a literature review, following ethical guidelines, and formulating lesson study questions.

Learning communities have been found to have favorable results in addressing various faculty and student outcomes. Findings from this study show that the lesson study learning community provided for faculty had similar results to studies that investigated the impact of lesson study learning communities on graduate students including lesson study skill development, knowledge, and increase in lesson study self-efficacy [18], [19]. This study shows that LC have a positive impact on lesson study outcomes which are like findings that show teaching leaning communities have a positive impact on teaching [2], [3], [8], [9].

Between group differences were compared through statistical analyses to observe the similarities in lesson study self-efficacy between the groups at both pre- and post-test. The results showed that on most of the domains, the participant groups were not significantly different at pre-test, except for the *Implementation* and *Grant* domains. This suggests that the two participant groups were not equal when beginning the academic year. However, at post-test, no significant differences were observed, showing that the two groups measured similarly on their perception of personal lesson study self-efficacy. These analyses were done to analyze the potential differences between the groups due to the lack of control over participants at each stage, which will be discussed as a limitation of this study. Most notable, however, is the significant increase found in the LC group over time, after participating in the lesson study learning community supplemented by the lack of increase in the non-LC group. The group of participants who did not participate in the LC showed no increase in lesson study self-efficacy over the course of one academic year. The group of participants in the LC showed a significant increase in lesson study self-efficacy in every domain, save *Early Task*, and in overall lesson study self-efficacy. This supports the notion that faculty did feel more confident and able to complete lesson study tasks, including scholarly and grant writing, than those new faculty who did not receive support and guidance from a formal and structured cohort and learning community.

What mentorship and support looked like for those participants not in the learning community is impossible to know. However, what is known is that no formal group or cohort learning community model was provided. These data show that regardless of what faculty outside the learning community received, it was not as strong in promoting the growth of lesson study self-efficacy when compared with a formalized, structured learning community. A study found that team lesson study and mentorship were two significant factors in promoting growth in SE in pre-service students [15]. The learning community format allowed for both group support and mentorship of new faculty, which may have impacted the significant growth in SE over time. Additionally, [11] found that one way to increase scholarship among faculty is to increase collegial relationships. Some possibilities of why the LC community group had significant growth in SE when compared to those not in the LC include formal mentorship, gathering in groups to discuss lesson study, collegiality and support a mandate to apply for and review other grants, and

the mandate to present lesson study at a public forum. More lesson study needs to be done on the specific factors of a LC that promote growth in new faculty.

The current study found that implementing a lesson study learning community for new faculty addressed university expectations of lesson study and scholarship. The faculty involved in the current LC produced more grants and more scholarly publications than faculty who did not participate. Additionally, personal perceptions of self-efficacy when doing lesson study significantly increased over time when compared to their non-LC participant counterparts. Given the focus that many tenure and promotion policies place on new faculty expectations of lesson study and scholarship, the current results have implications for universities who wish to support faculty lesson study agendas and increase lesson study and grant output. The long-term benefits of promoting participation in a lesson study learning community may include increasing retention as well as eventual tenure and promotion for new faculty.

Strengths of the Current Study

The current study has several strengths to be mentioned. First, the internal consistency of the subscales used in this study was shown to be high, ranging from 0.82 to 0.93. These alpha coefficients support the use of the SES as the quantitative measure. The study took place over the course of an academic year, with nine months between the pre-test and post-test and included both an experimental and control group. This length of intervention is strong and supports the notion that significant growth can occur over that period of time. Participants of this study were drawn from a population of 101 new faculty hired at one University. The participants had a wide range of academic backgrounds and came from a wide range of University programs around the country and internationally. Moreover, the effect size of the differences in perceptions of lesson study self-efficacy between those in the LC and those not in the LC are moderate. This supports the notion that lesson study learning communities can be useful tools in fostering scholarly activity and self-confidence in new faculty.

Limitations of the Current Study

Limitations include the lack of control of who took the pre-test and post-test. Due to the nature of the study, the LC were unable to control the participants on either end of the study. The lesson study was unable to monitor and track that the same participants were involved in both pre- and post-assessment, leaving room for error. 26 new teachers participated in the LC, 14 and 20 participated in study (at pre- and post-test, respectively). These numbers show that, for the most part, the same participants were involved in both the pre- and post-test. However, the control group was much larger with less participation proportionally at pre- and post-test, potentially increasing the variance of participants. Finally, the *Lesson study Self-Efficacy Scale* had a non-traditional Likert-type scale ranging from 0-100. This may have increased the variance for each question to the point where finding differences between participants may have been unnecessarily difficult. While the limitations regarding participant controls are significant, the data procured surrounding the impact of the LC on lesson study self-efficacy when compared with participants not in the LC were significant in showing preliminary results of the effectiveness of a LC.

Suggestions for Future Lesson Study

While learning communities have been found to be effective in supporting members self-efficacy, interest, and skill in certain areas, more lesson study needs to be completed on how learning communities can support new faculty in the quest for scholarly activity and success while on the road to tenure. An active scholarly agenda and successful publishing record is crucial to promotional success in academia. However, little is known about how learning communities can foster the success of faculty as they work toward tenure and promotion. The current study shows that a learning community focused on lesson study activity and grant production can support the growth in lesson study self-efficacy, the field is ripe for more understanding.

Future studies should address the lack of control over participants in the experimental and control groups found in the current study. A limitation of the current study included the potential for error based on the lack of control over pre- and post-tests participants. Future studies should work to control the two groups to tighten the results obtained of growth over time. As the current study focused on one midsized university in the Midwest, future studies should work to include a diverse group of faculties from a wide array of universities.

Additionally, future studies should be conducted to investigate the best practices in developing a lesson study learning community so that university programs can begin building learning communities knowing what works to promote scholarly activity and support. More lesson study can be done on the construct of lesson study self-efficacy and the impact that it has on faculty confidence, attitudes toward lesson study, self-esteem, sense of belonging and productivity. Lesson study into faculty learning communities indicates the most significant contributor to experiencing satisfaction in lesson study was faculty support and mentoring. Currently, the exact role of mentorship on the outcomes of lesson study learning communities is unclear. Further studies should be done to determine which factors, including mentorship, of the LC resulted in increased self-efficacy tasks, grant writing, and publication.

V. Conclusions

Tenure and promotion are crucial words to a pre-tenured teacher. Currently, the literature supports the notion that learning communities, in which pre-tenured teachers are involved, can promote teaching skills, activity and self-confidence in being able to do so successfully. The current study supports the notion that learning communities can be a successful modality in promoting lesson study self-efficacy in pre-tenured faculty as well as promote the production of grants

and scholarly activity. As more lesson study is done, the field of higher education can begin to understand how lesson study learning communities can support new faculty in being successful through the journey toward tenure.

DISCLOSURE

The author has no conflict of interest.

REFERENCES

[1] Oates, K. (2001). Developing the faculty, we need. *Peer Review, 3/4,* 9–13.
[2] Stevenson, C., Duran, R., Barrett, K., & Colarulli, G. (2005). Fostering faculty collaboration in learning communities: A developmental approach. *Innovative Higher Education*,*30*(1).
[3] Dodge, L., & Kendall, M. (2004). Learning communities. *College Teaching*, *52*(4), 150-155.
[4] Kaul, G., & Pratt, C. (2010). Undergraduate lesson study learning communities for first year and lower-division students. *Association of American Colleges and Universities*, 20-21.
[5] Lambie, G. W., & Vaccaro, N. (2010). Doctoral counselor education student's levels of lesson study self-efficacy: Perceptions of the lesson study training environment and interest in lesson study. *Counselor Educator and Supervision, 50*, 243-255.
[6] Mackenzie, J., Bell, S., & Bohan, J., Brown, A., Burke, J., Cogdell, B., Jamieson, McAdam, J., McKerlie, R., Morrow, L., Paschke, B, Rea, P. & Tierney, A. (2010). From anxiety to empowerment: A learning community of university teachers. *Teaching in Higher Education, 273-284*, *15*(3), 273284.
[7] David, J. (2008). Small learning communities. *Educational Leadership*, 84-85.
[8] Greeley, A.T., Johnson, E., Seems, S., Braver, M., Dias, L., Evans, K., Kincade, E. & Pricken, P. (1989). Lesson study Self-Efficacy Scale. Unpublished scale presented at the conference of the Association for Women in Psychology, Bethesda, MD.
[9] Eisen, A., & Barlett, P. (2006). The piedmont project: Fostering faculty development toward sustainability. *The Journal of Environmental Education*, *38*(1), 25-36.
[10] Bishop, R. M., & Bieschke, K. J. (1998). Applying social cognitive theory to interest in lesson study among counseling psychology doctoral students: A path analysis. *Journal of Counseling Psychology, 45,* 182-187.
[11] Love, K., Bahner, A., Jones, L., & Nilsson, J. (2007). An investigation of early lesson study experience and lesson study self-efficacy. *Professional Psychology: Lesson study and Practice*, *38*(3), 314–320.
[12] Hollingsworth, M., & Fassinger, R. (2002). The role of faculty mentors in the lesson study
[13] Kahn, J. H. (2001). Predicting the scholarly activity of counseling psychology students: A refinement and extension. *Journal of Counseling Psychology, 48,* 344-354.
[14] Forester, M., Kahn, J. J., & Hesson-McInnis, M. S. (2004). Factor structure of three measures of lesson study self-efficacy. *Journal of Career Assessment, 12,* 3-16.
[15] Holden, G., Barker, K., Meenachan, T., & Rosenberg, G. (1999). Lesson study self-efficacy: A new possibility for educational outcomes assessment. *Journal of Social Work Education*, *35*(3), 463-476.
[16] Greeley, A.T., Johnson, E., Seems, S., Braver, M., Dias, L., Evans, K., Kincade, E. & Pricken, P. (1989). Lesson study Self-Efficacy Scale. Unpublished scale presented at the conference of the Association for Women in Psychology, Bethesda, MD.
[17] Bieschke, K. J., Bishop, R. M., & Garcia, V. (1996). The utility of the Lesson study Self-Efficacy Scale. *Journal of Career Assessment, 4*, 59-75.
[18] Bieschke, K. J., Herbert, J. T., & Bard, C. (1998). Using a social cognitive model to explain lesson study productivity among rehabilitation counselor education faculty. *Rehabilitation Education, 12,* 1-16.
[19] Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *Journal of Higher Education, 68*(6): 599-623.