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Impact of Service-Learning on Student Counselors' Self-Reported Measures of Program Evaluation, Counselor Advocacy, and Interprofessional Education

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Abstract: Academic service-learning encompasses a reciprocal relationship among university and community partners. Service-learning can familiarize student counselors with future client populations, community resources, and other service providers. Service-learning pedagogy is flexible and may be particularly useful to promote development in counselor competencies more abstractly related to day-to-day client services, including program evaluation and professional advocacy. Interprofessional education serves as a means of enhancing interprofessional collaboration and, in turn, the well-being of individuals seeking healthcare services. Service learning may provide a vehicle to promote interprofessional education; however, researchers have not yet explored this connection. This quantitative research project evaluates pre- and post-changes of 18 participants using the Effective Practices Survey, Advocacy Competencies Self-Assessment Scale to measure experiences in program evaluation, counselor advocacy, and interprofessional education. Results indicate that student counselor scores significantly increased for each of the three variables of interest, with the largest changes observed for counselor advocacy.

What is the public significance of this article? Academic service-learning leverages relationships between university and community partners. Service-learning may be a particularly effective pedagogical strategy to promote applied and potentially abstract concepts. This article explores the impact of engagement in an experiential service-learning project on 18 student counselors' learning outcomes related to program evaluation, counselor advocacy, and perceptions of interprofessional education.

Keywords: service-learning, interprofessional education, advocacy, program evaluation

Academic service-learning encompasses a reciprocal relationship among university and community partners. Students benefit through applying course content in a practical setting and the community organization has a need met, such as a pro bono program evaluation. Service learning also enhances critical thinking, problem-solving, and communication skills for students, all of which contribute to a deeper understanding of the content (Warren, 2012).

The impact of service-learning on the knowledge acquisition of student counselors exists in the literature (e.g., death education, refugees, and advocacy; Bjornestad et al., 2016; Midgett & Doumas, 2016; Murray et al., 2010; Servaty-Seib & Tedrick Parikh, 2014). Service-learning permits student counselors to "learn about roles, processes, social barriers, and cultural considerations of their future client populations, community resources, and themselves as advocates and service providers" (Farrell et al., 2020, p. 528). Service-learning also supports student counselor professional development through familiarization with professional counseling roles, clarity on specializations of interest to the student, and

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networking opportunities (Jett & Delgado-Romero, 2009).

Most applications of service-learning in counselor education appear to transpire within practicum and internship courses (Lloyd-Hazlett, 2018); however, more research about the use of service-learning to promote student counselor development in nonclinical practice settings is needed (Barrio Minton et al., 2018; La Guardia, 2021). The present article examined the pre- and post-course outcomes in domains of: (a) program evaluation, (b) counselor advocacy, and (c) perceptions of interprofessional education (IPE) for student counselors enrolled in a service-learning-oriented program evaluation and consultation course. We hypothesized increased program evaluation competency, counselor advocacy, and perceptions of IPE as a function of the service-learning engagement. Implications for counselor preparation, professional practice, and future research are discussed. Brief reviews of literature related to each of the three variables are provided.

Counselor Program Evaluation

Program evaluations study organizations, emphasizing aspects of interest, including program design, planning, implementation, monitoring, and effectiveness (Steinberg, 2015). Program evaluation is salient to the counseling field due to the crucial need for periodically evaluating a program, namely the quantity and quality of services offered, the nature of their implementation, and the impact it is having (Erford, 2015; Steinberg, 2015). Accountability and evidence manifest through program evaluation, eliciting tangible information for stakeholders (Erford, 2015). Further, the CACREP 2016 Standards specify "Research and Program Evaluation" as a required common core area for all accredited counseling programs (Standard II.F.8). In line with ethical codes, counselors operating under the auspices of their professional counseling organizations must be proficient at conducting program evaluations and implementing evidence-based practices (American Counseling Association [ACA], 2014).

Despite the identified necessity of program evaluation posited for decades, counselors may be hesitant to use program evaluation methods. Peterson et al. (2020) examined the frequency with which counselors perform evaluation, if evaluation differs by type of counselor, and obstacles to conducting evaluation. The authors found counselors used single case and outcome-based evaluations most frequently. Primary obstacles to evaluation reported by participants included time, low administrative support, and funding. The belief that data collection is not relevant to professional practice was the lowest-ranked obstacle.

Necessary competencies regarding counselor program evaluation vary and often are not clear and consistent among training programs and assessments (Sink & Lemich, 2018). Students may enter the field for the clinical aspect of counseling, not realizing that program evaluation is an inherent element of being a professional counselor until they are in the midst of their graduate studies (Lloyd-Hazlett, 2018). Findings also suggest that counselors understand the importance of program evaluation, yet skills and confidence hinder them from engaging in program evaluation activities (Astramovich, 2016).

Sink and Lemich (2018) evaluated the current level of evaluation training provided to doctoral students attending nationally accredited programs through review of website materials. Results indicated that websites of more than 50% of the counselor education programs failed to identify what program evaluation preparation was required or offered to students. The authors highlight the centrality of program evaluation training for future counselor educators given the variety of program evaluation tasks associated with academia (e.g., monitoring and evaluating student learning outcomes, accreditation program self-studies, clinic-based results evaluation, faculty and staff community partner program evaluation research, and grant writing).

A study investigating student counselors' program evaluation knowledge, skills, and perceptions following a service-learning-oriented program evaluation course reported significant increases in pre- and post-class student learning (Lloyd-Hazlett, 2018). Further, pre- and post-class

data highlighted the value of service-learning in students' learning of program evaluation. Students viewed program evaluation as integral to their professional identity, in addition to gaining knowledge and confidence in their program evaluation skillset (Lloyd-Hazlett, 2018). Program evaluation and advocacy strongly interrelate as captured by the concept of "advocacy evaluation," a progressive approach to program evaluation that centers on future growth rather than exclusively on past outcomes (Astramovich et al., 2017, p. 320).

Counselor Advocacy

Within the CACREP Standards, advocacy is of primary importance, highlighted throughout various sections of the 2016 edition. Specifically, in professional counseling orientation and ethical practice, the standards outline "the role and process of the professional counselor advocating on behalf of the profession" and "advocacy processes needed to address institutional and social barriers that impede access, equity, and success for clients" (Standard II.F.1). Further, CACREP Standards refer to advocacy in other sections, including social and cultural diversity, career development, accentuating the importance of advocacy in all regards of counseling.

The ACA Advocacy Competencies identify three levels of advocacy: client/student, school/community, public arena (Lewis et al., 2002). The client/student advocacy level occurs on an individual, microlevel scale. At the school/community level, the counselor and community may collaborate to address a problem and create an accompanying plan. From a macrolevel lens, the public arena level could entail notifying the public of pertinent issues from a large scale and promoting policy or legislative change (Toporek et al., 2009). Advocating for the counseling profession, on all three levels, is critical for ensuring quality and ethical practice that best supports all clients (Brat et al., 2016; Havlik et al., 2019).

Farrell and colleagues (2020) outlined service-learning frameworks and related course assignments that can be used to address the 2016 CACREP Standards for leadership and advocacy. The authors highlight service-learning as a pedagogical strategy particularly suited to enhance student counselor advocacy and leadership competencies in part because of the opportunity afforded to understand the longer-term impact of counselors in the community. Further, "skills, theory, and issues in counseling become real and complex, as opposed to two-dimensional case examples provided in a classroom" (Farrell et al., 2020, pp. 524–525). Much like advocacy, counseling students can grow in their value of interprofessional collaboration after sitting with its complexities and impact in a clinical setting.

Interprofessional Education

Interprofessional education (IPE) serves as a means of enhancing interprofessional collaboration and, in turn, the well-being of individuals seeking healthcare services (Yancey et al., 2018). The Core Competencies for Interprofessional Collaborative Practice were developed by the Interprofessional Educational Collaborative (IPEC; IPEC Expert Panel, 2011). The competencies outline a theoretical model that develops and assesses the knowledge, skills, and attitudes of the learning related to interprofessional domains of: (a) value and ethics, (b) roles and responsibility, (c) interprofessional communication, and (d) teamwork and team-based care. IPE unfolds through sequential steps of exposure, immersion, and competence (IPEC, 2011).

The CACREP 2016 Standards also highlight counselors' roles and responsibilities as "members of an interdisciplinary community," serving on "interdisciplinary treatment teams," and "interfacing with medical and allied health professionals, including interdisciplinary treatment teams" (Section 2, F, 1; Section 5, D, 2, b; Section 5, D, 3, d). Mental health professionals are often included in multidisciplinary teams. Frequent types of collaborative practice included treatment planning/consultation, ongoing treatment coordination, and shared space (Greidanus et al., 2020). Facilitators of collaboration practice include consideration of ethical issues from multiple species, well-defined scope of practice and competencies, and common codes of conduct.

While matriculating student counselors are expected to operate on collaborative care teams, didactic instruction and engagement opportunities targeting interprofessional milieus are not common (Vereen et al., 2018). Identified barriers to IPE include costs, scheduling conflicts, differing approaches to assessing patients, lack of facilities equipped with interprofessional structure, and skepticism of how IPE affects clinical practice (Johnson et al., 2014; Vereen et al., 2018).

Emergent IPE counseling literature supports a myriad of benefits. Specifically, Johnson et al. (2014) found improved perspective of the importance of acquiring teamwork and collaborative skills, effective community, and interprofessional respect and trust following a semester-long interprofessional course Additionally, Levine and colleagues (2021) examined the impacts of interprofessional education on trauma- and violence-informed care for staff in primary care settings. Opportunities for interprofessional dialogue emerged as critical to the learning process, with interprofessional conversations impacting conceptions, integration, and prioritization of trauma- and violence-informed care (Levine et al., 2021). Per McAuliffe and Eriksen's (2011) depiction of applying Dewey's experiential learning concepts to counselor education, counseling students are meant to construct understandings through experiencing indeterminate situations wherein they create and test hypotheses. Service-learning in a program evaluation course serves as an opportunity for students to create and test hypotheses not only in the vein of program evaluation but also in advocacy and interprofessional collaboration.

Current Study

Program evaluation, counselor advocacy, and IPE are recommended competencies for future counselors (ACA, 2014; Council for Accreditation of Counseling and Related Educational Programs [CACREP], 2016). Further, relevant service learning opportunities can enhance student coursework and help students develop the necessary competencies to be more effective counselors (Farrell et al., 2020; Lloyd-Hazlett, 2018). The primary aim of this study was to evaluate pre- and post- changes in program evaluation competency, counselor advocacy, and perceptions of IPE after the completion of a graduate program evaluation and consultation course. As the course was composed of both master's- and doctoral-level students, we also completed a secondary analysis of the pre- and post-test descriptive statistics stratified by either doctoral- or master's-level counseling student classification. Moreover, we hypothesized that program evaluation competency, counselor advocacy, and perceptions of IPE would increase as a function of the service-learning engagement.

Method

Participants

Prior to data collection, the Institutional Review Board (IRB) reviewed and classified the project as research not requiring further IRB oversight. After review, a convenience sample of 24 graduate students was recruited from a graduate-level counselor program evaluation and consultation course at a CACREP-accredited university. Twelve (50%) participants identified as doctoral students and 12 as clinical mental health counseling master's students. Respondents were between the ages of 23–58 (Mean = 36.13 years, SD = 11.58; female 75%) and 10 self-identified as Caucasian (41.7%), 5 as Hispanic/Latinx (20.8%), 5 as Black/African American (20.8%), 3 as multiple ethnicities (12.5%), and 1 preferred not to answer (4.2%). Due to missing data, participant errors, and measurement error, only 18 participants (50% doctoral) were included in the final sample.

Since data were collected as part of a service-learning project and analyzed after project completion, a sensitivity analysis was conducted in G*Power (Faul et al., 2007). Following the criteria suggested by Perugini et al. (2018), a two-tailed dependent groups t-test with 18 participants would be sensitive enough to detect an effect size of Cohen's d = 0.70 with an alpha level of .05 and power-level of .80. In other words, effect sizes smaller than Cohen's d = 0.70 would not be significant.

Data Collection

Data for the study were collected in the summer of 2018 as part of a graduate-level program evaluation and consultation course instructed by the first author. The course included an extensive service-learning project wherein students examined barriers and pathways to integrated behavioral healthcare delivery at four primary care clinics in the Southwest. Students worked in assigned service-learning teams to conduct an applied program evaluation project. Specifically, students designed, conducted, and analyzed data from practitioner focus groups at each training site. Doctoral students helped facilitate the service-learning teams. Projects culminated with formal in-class presentations with invited community partners. In-class time was allotted throughout the semester for service-learning teams to work together. Students were also expected to attend a prescheduled focus group session at their assigned clinic. A full copy of the course syllabus is available upon request.

Instrumentation

Program Evaluation. The Effective Practices Survey (EPS) was used to measure evaluation competency for school counselors (Maras et al., 2013). The EPS consists of 19 items on a 6-point Likert-type scale with values ranging from "1, very unconfident/strongly disagree" to "6, very confident/strongly agree." Further, the EPS was modified for use in the current study, with items more reflective of evaluation competencies for professional counselors/trainees. Sample items include "I use agency data to identify client strengths and needs" and "My counseling activities include measurable and objective goal." In the current study, all items were coded in a similar 6-point Likert scale format (e.g., 1, disagree; 2, somewhat disagree, 3, neither agree nor disagree; 4, somewhat agree; 5, agree; 6, strongly agree). Although the EPS consists of four subscales (e.g., evaluation self-efficacy, guidance programs, statistics, and evaluation values and beliefs), a summed score range was used for the current study (e.g., 19–114), with higher scores indicating greater levels of evaluation competency. Moreover, the EPS has been demonstrated to have adequate reliability for each subscale (Cronbach's alpha = .85–.95), is valid, and has been normed for use with novice and experienced school counseling professionals (Maras et al., 2013). In the current study, the modified EPS demonstrated excellent internal consistency in the current study, pre- (Cronbach's alpha = .91) and post-test (Cronbach's alpha = .90).

Counselor Advocacy. The Advocacy Competencies Self-Assessment (ACSA) Survey was used to measure total advocacy competency among counseling trainees (Ratts & Ford, 2010). The ACSA consists of 30 items on a 3-point Likert-type scale with values ranging from "0, almost never" to "4, almost always." Items 1,7, and 13 were reverse-scored prior to analysis. The ACSA consists of one total advocacy scale and 6 advocacy subscales (e.g., client/student empowerment, community collaboration, public information, client/student advocacy, systems advocacy, and social/political advocacy); only the total advocacy scale was used in the current study. The ACSA also has a summed score range from 0–120; a range of 0–69 indicates "lower scores in certain advocacy domains," 70–99 indicates having "some of the pieces in place," and 100–120 indicates "you're on the way to becoming a strong and efficient social change agent," with higher scores indicating greater levels of advocacy competency. Further, the ASCA has been demonstrated to be reliable (Cronbach's alpha = .93), valid, and normed for use with mental health professionals (Bvunzawabaya, 2012). In the current study, the ACSA demonstrates excellent internal consistency in the current study, pre- (Cronbach's alpha = .90) and post-test (Cronbach's alpha = .94).

Interprofessional Education. The Interdisciplinary Education Perception Scale (IEPS) was used to measure professional perceptions while working in an interdisciplinary environment (Luecht et al., 1990). The IEPS consists of 18 items on a 6-point Likert-type scale with values ranging from "1, strongly disagree" to "6, strongly agree." Additionally, the IEPS consists of one total perception scale and four subscales (e.g., competency and autonomy, perceived need for cooperation, perception of actual cooperation, and

understanding others' values). In the current study, all items were coded in a similar 6-point Likert scale format (e.g., 1, disagree; 2, somewhat disagree, 3, neither agree nor disagree; 4, somewhat agree; 5, agree; 6, strongly agree). In addition, item 10 (e.g., Individuals in my profession trust each other's professional judgment) was excluded from the analysis. Only the total scale was used for the current study (e.g., 17–102), with higher scores indicating greater levels of professional perception. Further, the IEPS has been demonstrated to be reliable (Cronbach's alpha = .87), valid, and normed for use with student samples (Luecht et al., 1990). In the current study, the IEPS demonstrates excellent internal consistency in the current study, pre- (Cronbach's alpha = .85) and post-test (Cronbach's alpha = .86).

Data Analytic Plan

All quantitative analyses were conducted in SPSS Version 27 (IBM, 2020). First, descriptive statistics were conducted to describe the sample. Next, the dependent and independent groups t-tests were conducted to examine pre- and post-test changes, and if these changes differed according to enrollment status (e.g., doctoral vs. master's student). Then, effect sizes were computed and compared to results of the previous sensitivity analysis. Last, standard error and 95% confidence intervals were computed for each effect size (Watson et al., 2016).

Results

All statistical assumptions were examined prior to analysis. First, skewness and kurtosis were evaluated for all the variables, pre- and post-test. No violations were observed based on the small sample size (N = 18) and low z-scores (< + 1.96; Kim, 2013). Next, post-test scores were subtracted from pre-test scores for each summed variable to create a separate "difference" variable for analysis. Histograms of each variable were then plotted and yielded normal distributions (Field, 2018). Last, a Kolmogorov-Smirnov test of normality was also conducted resulting in a nonsignificant value (p > .05) for each variable.

With these assumptions met, a paired samples t-test was performed to assess pre- and post-test changes (see Table 1). First, a significant change was observed in pre-test and post-test EPS scores across all participants, t(17) = 2.95, p = .009, Cohen's d = .70, SE = .34 , 95% CI [.03, 1.37]. In other words, participants reported a 70% of one SD increase in perceived evaluation competency after the completion of a graduate program evaluation course, from PreEPS = 86.83 to Post-EPS = 99.89, an improvement of 13.06, p = .009. Next, a significant change was not observed in pre-test and post-test IEPS scores across all participants, t(17) = 2.53, p = .021, Cohen's d = .60, SE = .34, 95% CI [-.07, 1.27]. The effect size measure failed to exceed the preestablished threshold (Cohen's d > .70) and the 95% confidence interval exceeded a value of 0

Table 1

Means and Standard Deviations for Master's and Doctoral Students at Time 1 and Time 2 for Evaluation Competencies, Professional Perceptions, and Total Advocacy Competencies (N = 18)

	MT1	*SDT1*	*MT2*	*SDT2*	*t(17)*	*Cohen's d*	*95% CI*
1. EPS	86.83	14.30	99.89	9.29	2.95	.70*	[.03, 1.37]
2. IEPS	91.33	11.80	100.06	10.05	2.53	.60	[-.07, 1.27]
3. ACSA	72.44	19.06	96.89	18.84	3.93	.93*	[.21, 1.59]

Note. EPS = Effective Practices Survey; IEP = Interdisciplinary Education Perception Scale; ACSA = Advocacy Competencies Self-Assessment Survey. * = significant based on sensitivity analysis (*Cohen's d* ≥ .70)

Table 2

Means and Standard Deviations at Time 1 and Time 2 for Evaluation Competencies, Professional Perceptions, and Advocacy Competencies for Master's Students at Times 1 and 2 (N = 9)

	MT1	*SDT1*	*MT2*	*SDT2*
1. EPS	88.33	15.92	97.67	6.29
2. IEPS	91.67	11.79	103.67	8.85
3. ACSA	73.11	19.26	91.56	20.34

Note. EPS = Effective Practices Survey; IEPS = Interdisciplinary Education Perception Scale; ACSA = Advocacy Competencies Self-Assessment Survey.

(Watson et al., 2016). Last, a significant change was observed in pre-test and post-test ACSA scores across all participants, $t(17) = 3.93$, $p = .001$, Cohen's $d = .93$, $SE = .35$, 95% CI [.21, 1.59]. In other words, participants reported a 93% of one SD increase in perceived total advocacy competency after the completion of a graduate program evaluation course, from Pre-ACSA = 72.44 to Post-ACSA = 96.89, an improvement of 24.44, $p = .001$.

Next, we completed a secondary analysis of the pre- and post-test descriptive statistics stratified by either doctoral (n = 9) or master's (n = 9) level counseling classification (see Tables 2 and 3). Further analysis was considered; however, the histograms yielded multiple nonnormal distributions, so no further tests were conducted (Field, 2018). Although no significant differences were observed between master's- and doctoral-level students, noticeable differences in pre- and post-course scores were observed across the two groups.

Discussion

Student counselor scores increased for each of the three variables of interest, while moderate to large effect sizes were only observed for program evaluation competencies and perceived total advocacy competency (Watson et al., 2016). There was a 15 % increase in program evaluation competencies and a 33.8% increase in perceived total advocacy competency. The effect size for interprofessional education failed to exceed the

Table 3

Means and Standard Deviations at Time 1 and Time 2 for Evaluation Competencies, Professional Perceptions, and Advocacy Competencies for Doctoral Students at Times 1 and 2 (N = 9)

	MT1	*SDT1*	*MT2*	*SDT2*
1. EPS	85.33	13.27	102.11	11.52
2. IEPS	91.00	12.51	96.44	10.35
3. ACSA	71.79	19.99	102.22	16.63

Note. EPS = Effective Practices Survey; IEPS = Interdisciplinary Education Perception Scale; ACSA = Advocacy Competencies Self-Assessment Survey.

preestablished cutoff (e.g., Cohen's d > .70; Perugini et al., 2018), suggesting the current study was not adequately powered for detecting this effect. Like previous research, this study suggests that service-learning can foster connections between learning and practice for counseling students and potentially increase self-efficacy (e.g., Havlik et al., 2019; Midgett et al., 2016; Overton et al., 2015).

Implications for Counselor Training and Practice

Several implications for counselor training and practice stem from this study. While traditionally utilized in clinical courses, service-learning provides a practical, meaningful context for student counselors to engage with topics such as program evaluation (Lloyd-Hazlett, 2018), interprofessional education, and advocacy (Farrell et al., 2020). These service-learning experiences help strengthen classroom learning by increasing self-efficacy and could potentially increase the likelihood of the continued use of key skills beyond graduate training (Overton, 2015). Counselor educators are encouraged to survey their curriculum with a critical eye to counselor competencies benefiting from service-learning application to strengthen the connection between classroom and real-life application (Farrell et al., 2020). Program audits may be used to identify potential gaps, ultimately leading to development of a crosswalk of goals, curricular offerings, and pedagogical strategies.

Implications also exist for scaffolded instruction within blended counselor education courses. While there were not significant differences in pre- and post-course changes between master's and doctoral students enrolled in the course, noticeable differences in pre- and post-scores of program evaluation competency, counselor advocacy, and perceptions of IPE were observed across the two groups. The course design provided opportunities for doctoral students to serve as leaders of the program evaluation teams as well as help prepare them to teach about program evaluation. Counselor education students value courses that help prepare them for future faculty roles (Baltrinic & Suddeath, 2020; Preston et al., 2020). Such innovative pedagogies align with expanded doctoral accreditation standards that included leadership and advocacy (CACREP, 2016). Further, counselor educators frequently work in interdisciplinary teams, conduct program evaluations, and engage in significant advocacy work to advance the counseling profession (Sink & Lemich, 2018). Consideration may be given to doctoral-level assignments where students can review research on service-learning design and benefits, and then design and implement these courses.

While the CACREP Standards reference interprofessional practice in several areas, counselors have been less readily integrated into these spaces (Johnson & Mahan, 2019). Direct exposure to interdisciplinary professionals, such as those afforded through the presently described service-learning experience, is critical. Counselors must understand what is occurring in the movement toward interprofessional health care delivery and what they can offer a team (Greidanus et al., 2020). Additionally, it is important for medical providers to understand that client outcomes are often improved through higher quality care when there is a mental health counselor on the interdisciplinary team (Johnson & Mahan, 2019; Ulupinar et al., 2021). Critical professional counselor advocacy opportunities include development of interprofessional competency frameworks attentive to specific counseling contexts and continued integration of IPE in counselor education and supervision.

Limitations and Future Research

This study utilized a convenience sample of graduate students, which limits generalizability and sample size. Due to the novel implementation of this embedded service learning project, minimal covariates were included. Additional factors such as prior program evaluation experience and the unique context of the course may have influenced the findings. Next, the EPS was used to assess program evaluation competencies in this study. While the EPS demonstrated excellent pre- and post-test reliability, this measure has not been normed for use outside of a school setting (Maras et al., 2013). Future studies will seek to replicate the current findings with the EPS and include additional

program evaluation measures for comparison. Finally, the study included only pre- and post-test measures of program evaluation competency, counselor advocacy, and perceptions of IPE. Implementation of a longitudinal framework could strengthen this study's findings and demonstrate whether the completion of service-learning projects can lead to lasting changes.

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