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A mixed method mentorship audit: assessing the culture that impacts teaching and learning in a polytechnic

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Abstract

The benefits of mentorship to individuals in post-secondary relate to wellbeing, satisfaction, and perceived success which translates to organizational commitment. Mentorship improves skills in academic roles and leadership, yet a disconnect remains on what mentees and mentors expect and what institutions provide. Supports are required for mentorship to be effective in empowering employees and creating a culture that espouses competence and autonomy through collaboration and creativity. The aim of this research was to replicate and advance an earlier study assessing nursing and health sciences in a polytechnic to describe the perceived mentorship culture for faculty, professional services, and leadership, across a provincial organization. This was accomplished through a sequential descriptive mixed methods study assessing the building blocks and hallmarks of a Mentorship Culture Audit. This paper reports on both the comparative assessment from 2013 and this new quantitative survey, along with a qualitative component enhancing the understanding of the mentorship culture within a polytechnic providing a variety of programming for vocational students. The audit revealed the employee perception of a mentorship culture to a mean of 4.52 on a seven-point Likert scale and noted areas of strength or infrastructure to be developed. Qualitative data portrayed further understanding where hallmarks of mentorship promoted or were lacking for informal or formal structures. Organizations benefit from mentorship. Tailoring mentorship to a framework ensures mentorship is anchored for success. This study is unique in its replication, the mixed methods approach, and its originality as an organizational level mentorship assessment.

Keywords: Mentorship, Leadership, Culture, Audit, Organization, Interprofessional, Polytechnic, College, Mixed methods

Introduction

The benefits of mentorship span not only the areas of mentee wellbeing and success, but also include benefits to mentors and institutions as a whole. However, research specific to post-secondary, non-medical college or polytechnic institutions providing a macro-level assessment of mentorship was scarce. Research tended toward tenure-track institutions and focused on supporting mentee development of research or scholarly capacity (Harker et al. 2019). An organizational approach to mentorship is not just about business

success, focusing on one aspect of career development, or delivering formal programs designed to manage communication, but to support mentorship efforts toward creating a culture (Zachary 2005). Mentorship research has shifted from an orientation of product—mentee satisfaction and success—to one of process—reflection on the knowledge acquired and how it can be applied (Zachary 2005). In a post-secondary polytechnic setting, the purpose of mentoring is to support staff, leadership and faculty to develop further skills; those with primary professional training who moved into the education domain.

The nature of the organization assists in differentiating mentorship from coaching, apprenticeship, and preceptorship because polytechnics use these approaches in program design for student success. Coaching is often a contractual partnership to enhance skills (Zachary 2005). Apprenticeship is structured and supervised with a focus on learning while working—therefore, paid and not volunteer (Saskatchewan Apprenticeship 2021). Preceptorship is role modelling of professional practice, over a delimited time frame, with specific requirements for learning goals, feedback and evaluation criteria. The definition of mentorship, then, is a voluntary partnership focused on learning and a result of accountable relationship building bent on mutual self-directed goal achievement (Zachary 2005). For this institution, while the programs varied in delivery length, content, and professional requirements, coaching, apprenticeship and preceptorship were roles for students or colleagues external to the organization, while mentorship was the relationship between internal employees.

Research has shown that mentors significantly influence mentees within post-secondary settings (Tareef 2013). Mentees noticed benefits to their careers as they received guidance and assistance in teaching, working with students, setting performance goals, completing research, working toward tenure and promotions, and progress in their careers (Fountain and Newcomer 2016; Tareef 2013; Waller and Shofoluwe 2013; de Vries et al. 2006; Jackevicius et al. 2014). Being a mentor was positively correlated with satisfaction with current work position and career progress, leading to satisfied staff and faculty (Tareef 2013). Mentors in a leadership development program saw mentoring as “impacting on their attitudes and behaviours [which] has a ripple-on effect to their workplaces, and more broadly to the institution” (de Vries et al. 2006). This translates to a correlation between the quality of mentoring relationships and occupational commitment (Gwyn 2011), as well as a positive relationship with job satisfaction (Chung and Kowalski 2012).

Mentoring is proven to have a significant relationship with improving skills pertinent to academic roles, such as advising students and receiving grants (Tareef 2013); however, other research suggests that mentoring activities may overlook basic practical skills necessary for professional work and conceptual issues which should guide mentees to plan and make decisions for their work and careers (Foote and Solem 2009). Jackson et al. (2015) note that mentors tend to guide discussion to bigger-picture professional development, while mentees tended to focus on here-and-now issues, suggesting a disconnect between mentee expectations and what mentors and institutions provide.

Institutional environments both influence and are influenced by mentoring. Effective mentoring requires support from departments and institutions and can, in turn, positively influence departments and institutions. Singh et al. (2014) found that empowering

work conditions were associated with faculty feeling their work was meaningful, they were competent and autonomous in their work, and that the institutional culture was collaborative and creative rather than competitive. An institutional culture that was creative and collaborative encouraged the development of mentorship policies and supports for faculty (Singh et al. 2014). Institutional politics play a role in the mentorship offered by an institution; a bad department head or negative department culture greatly affected the mentoring experience (Gibson 2006). Alternatively, Akpey-Mensah and Muchie (2019) reported on a less-rigid mentorship program based on the African philosophy of humanness (*Ubuntu*) that resulted in increased capacity for female academics through building a community of caring and support where the goal was for all to succeed. The result being increased competence, a sense of loyalty, and commitment. Support from senior staff and faculty, such as the academic unit head, influenced the success of mentoring in an institution (Fountain and Newcomer 2016). Faculty leadership and commitment created an environment in which mentoring could succeed, and institutions with high-level leadership buy-in and academic-unit head supports were more likely to have formal mentoring programs and influence the success of mentoring (Fountain and Newcomer 2016).

Challenges to mentoring identified through previous studies include a gender disparity in mentors and mentoring opportunities, time constraints, unclear expectations, lack of motivation, insufficient resources and lack of rewards (Fountain and Newcomer 2016; Gibson 2006). Harker et al. (2019) found in their longitudinal mixed methods assessment of a mentoring program for scholarly capacity of librarians that while the goals included increasing professional skills, career success was difficult to evaluate as an outcome. Successful mentoring programs have been based on the ethics of care such as approachability and empathy and result in increased confidence (Harker et al. 2019) or career resilience (Wyllie et al. 2020). These, coupled with practical policies such as strategic meeting setting, feedback, and guidance, lend themselves to successful mentoring relationships (Blauvelt and Spath 2008). Mentoring that is voluntary and committed to the well-being of mentors and mentees provided gains for those involved such as the experience required to transition into leadership roles (Jackevicius et al. 2014; Wyllie et al. 2020).

Despite the tradition of mentorship through apprenticeship and other pre-professional training delivered through post-secondary technical education, scant research has focused on mentorship of faculty, professional services and leadership in this sector. Additionally, a paucity of research exists on mentorship from an organizational perspective. Specific to the polytechnic that is the focus of the current study, a survey using the Mentorship Culture Audit (Zachary 2005), was administered in 2013 with the Schools of Nursing and Health (Sheridan et al. 2015). The current study replicated that research institution-wide, across four campuses in four different cities in a mid-western prairie province, while adding a qualitative portion to add depth to interpreting the quantitative results. The results of the 2013 survey reported on the building blocks of the infrastructure and mentorship culture shaped by eight hallmarks derived from institutional and individual values: alignment, accountability, communication, demand, education and training, multiple mentoring opportunities, safety nets, and value and visibility (Zachary 2005). Nursing and health faculty and staff perceived a moderate mentorship culture

that was variably supported by a demand and alignment with the values of mentorship, but not with tangible infrastructure and resources (Sheridan et al. 2015).

In this same institutional context, but broadened in scope and with the passage of time, the current study explores what mentorship is available to faculty, program heads and staff, and leadership including academic chairs, deans, associate deans, and senior managers. The research team sought to explore employee perceptions of mentorship across the full institution to understand the institutional culture and its influence on the availability and practice of mentoring relationships. The aim of our research is to build on the earlier study and to describe the perceived mentorship culture for faculty, professional services, and leadership in a provincial learning organization.

Methods

This research was an explanatory sequential mixed method design. The Mentorship Culture Audit (Zachary 2005) gathered quantitative data to provide an organization wide baseline assessment. Two research questions guided the quantitative phase:

1. Does a mentorship culture exist across the organization?
2. What supports or gaps exist in the mentorship culture?

The Mentorship Culture Audit (Zachary 2005) is a 50-item survey utilizing a seven-point Likert scale of agreement. The survey, while using an organizational copy of Microsoft Forms, was anonymous. Participants began the survey agreeing to the consent form.

Qualitative data, gathered through focus groups and interviews, was used to provide examples of how the administration, staff and faculty perceive the two building blocks and eight hallmarks of Zachary's (2005) mentorship culture.

One research question guided this phase:

1. How is mentorship supported among and between faculty, leadership and professional services?

Within the survey, participants were asked to indicate interest in further discussion of mentorship and to provide contact information. From these participants, focus groups were organized at each campus; in addition, interviews were conducted in person, by telephone, or by Zoom for participants who were unable or chose not to attend a group setting. For both focus group and interviews, a general discussion of culture commenced after obtaining written consent.

Participant description

The population was all faculty, staff and leadership across four main campuses across the province; approximately 2000 employees. Table 1 depicts the employment and demographic data of the survey sample ($n=279$), a response rate of 14%. As noted in the percentages of responses in Table 1, participants were not required to answer any question. The lack of responses to some demographic data, and the comments in some open-ended text boxes, revealed that participants were wary of how this research

Table 1 Participant demographics

Descriptor	Total n = 279	%*
Years employed		
< 1 year	21	8
1–5 years	51	18
6–10 years	55	20
11–20 years	46	16
> 20 years	16	6
Academic and student supports		
Applied Research & Innovation	1	–
Arts & Sciences	7	3
Business	10	4
Construction	10	4
Health Sciences	26	9
Hospitality & Tourism	1	–
Human Services & Community Safety	12	4
Information Communications Technology	1	–
Learning & Teaching	26	9
Literacy & Adult Education	5	2
Mining Engineering & Manufacturing	14	5
Natural Resources & Built Environment	4	1
Nursing	31	11
Student Services	15	5
Transportation	8	3
Non-academic departments		
Communications & Marketing	6	2
Finance	8	3
Human Resources	2	–
IT Services	2	–
Age		
21–29	8	3
30–39	30	11
40–49	53	19
50–59	64	23
60 or older	22	8
Sex		
Female	123	44
Male	46	16

*Percentages will not reflect the total sample as all questions did not require a response

would be utilized by the organization. The research team agrees that this has impacted the response rate. Replication and dissemination of this research may impact response rate in the future. Most participants were faculty ($n = 121$), female ($n = 123$), and in the 50–59 year old age group.

Regarding experience with mentorship, Table 2 depicts that slightly less than a quarter of participants indicated involvement in a mentorship relationship, with the majority of those relationships considered informal. Length of the mentorship relationship was most often of relatively short (less than 5 years) duration. Mentoring relationships can be structured by programs online or face-to-face with a variety of expectations for

Table 2 Participant mentorship experience

Mentorship		%*
In a mentor/mentee relationship		
Yes	68	24
No	110	39
Nature of mentoring relationship		
Formal	17	6
Informal	64	23
Length of mentoring relationship		
Less than 1 year	36	13
1–5 years	26	9
6–10 years	13	5
More than 10 years	5	1

*Percentages will not reflect the total sample as all questions did not require a response.

learning (Houston 2019). Informal relationships were often initiated by the mentee while formal relationships may be organizationally supported, have expectations for development including learning outcomes, scheduled meetings, feedback loops, and reflective obligations (Houston 2019).

Ethics statement

The project was deemed exempt on January 8, 2019 by the ethics board of record. Approval to conduct the research was obtained from the Office of the President of the institution. The survey link was emailed to all employees in February 2019 and closed at the end of April 2019. Interviews and focus groups began at that time and were completed by December 2019.

Quantitative analysis

Several statistical tests were completed to analyze the results of the survey, using the R statistical programming language (R Core Team 2018). Package Coin (Hothorn et al. 2006) was used to conduct Wilcoxon rank-sum tests, while Package HH (Heiberger and Holland 2015) was used to produce diverging stacked bar charts to visualize Likert scale responses.

Descriptive statistics including mean score, standard deviation, minimum score, maximum score, and range were tabulated for each survey (2013 and 2019). The Shapiro–Wilk test of normality and quantile–quantile plots demonstrated non-normality for certain subscales. Therefore, the non-parametric Wilcoxon rank-sum test was applied to test for statistically significant differences in demographic subgroups and between survey administration years.

Reliability was examined using R package psych (Revelle 2015). Cronbach's alpha (raw and standardized) was used as a measure of internal consistency reliability. Subscale intercorrelations and item-specific statistics were also calculated.

Qualitative analysis

In total, 72 people requested to participate in an interview or focus group, and 32 participated after follow up. We did attempt to ensure representation across sites and across

the cohorts of leadership, faculty and staff to present a broader picture of the whole organization. As the number of participants who volunteered to be interviewed dropped to half, we did become purposeful and intentional in representing the smaller sites, to meet transferability rigor criteria. To ensure credibility, the interviews and focus groups were digitally recorded. The data were transcribed and analyzed using Nvivo software to find representative quotations for each building block and hallmark. The Nvivo codebook was shared and discussed amongst researchers early in the process, as both an audit trail and to confirm consensus in content analysis style. Three members of the research team equally split the qualitative data for initial analysis, then all team members came to consensus on the appropriate quotations to represent the building blocks and hallmarks, as well as that meaning in relation to quantitative subscale scores. As three of the team members are employees from three different academic and non-academic areas, this also served as triangulation of the data for dependability purposes, as researchers could cross-examine experiences of working in the organization.

Mixed methods legitimation

This research used the guidelines for designing and reporting mixed methods as provided by Leech and Onwuegbuzie (2010) and described by Younas et al. (2020). For sample integration legitimation, the qualitative participants were invited from those who completed the survey, ensuring they understood the discussion would be about the Mentorship Culture Audit. The researchers oscillated perspectives for insider–outsider legitimation as three members were employees of the organization. Researchers were insiders when analyzing and interpreting data on their academic or non-academic department and during interviews or focus groups with participants from their work area but were outsiders when reviewing quantitative data that had been analyzed by an external statistician, and interviewing members outside their work area. Weakness was minimized by using the building blocks and hallmarks as open-ended questions to support quantitative results. The research could have been conducted as qualitative prior to quantitative because the theoretical basis was an audit encompassing two building blocks and eight hallmarks (Zachary 2005) which structured both the interview guide and the survey questions. Therefore, inferences would not have been affected, increasing the sequential legitimacy. Conversion legitimation, quantizing and qualifying data was not performed in this study, as it was designed from the beginning to be sequential with integration of findings after separate analyses were complete for each phase. The paradigmatic approach to mixing data was constructivist as questions were designed to be answered in relation to experiences with others. Commensurability legitimation was best depicted in the discussion section when the mixed method viewpoint was presented; suggesting that the quantitative data was an aggregated presentation of organizational culture, combined with the individual perspectives of mentorship for faculty, staff and leadership. As well, the research team has members whose strengths include qualitative, quantitative, and mixed methods focused research, encouraging discussion and cognitive shifts between paradigms. Multiple validities were legitimated through individual realities by interview, collective reality by focus group, comparisons in quantitative subscales between academic and non-academic departments, and inclusion of

participants from staff, faculty, and leadership. This also met political criteria, as participants with differing responsibilities and accountabilities were included.

Results

For this sequentially designed study, the quantitative data was collected and analyzed separately first, followed by qualitative collection and analysis. This is reported in sequence here, resulting in integration of findings as answers to the research questions.

Quantitative results

Results are reported beginning with the overall mean scores for aggregate building block and hallmarks comparing the 2013 results for Nursing and Health to the 2019 results for the entire organization. Further breakdown of those results is presented by academic and non-academic departments for 2019.

Organizational comparison over time

Comparison of results between the 2013 survey of Nursing and Health to the 2019 full-organization survey, in Table 3, shows internal consistency with the scales used to describe each element of mentorship culture. With the exception of culture and infrastructure, reliability of test results increased in the 2019 sample compared to the 2013 sample. A history of mentorship may explain the significant results for a stronger mentorship culture in Nursing.

Academic and student supports compared to non-academic departments

In Tables 4 and 5, a positive estimate in effect size means that the first group in column *Scale* scored higher than the second group, while a negative estimate means that first group scored lower (i.e., interpreted as the second group scoring higher). These results indicate that Nursing and Financial Services scored significantly higher on the culture subscale, with medium to large effect sizes, than several other academic schools and non-academic departments. Schools that appear to have lower relative scores on Subscale A Culture than others include Business, Literacy and Adult Education, and Mining,

Table 3 Zachary's Mentoring Culture Audit: Descriptive Results

Subscale	2013 Nursing and Health			2019 Entire institution		
	n	Mean (\pm SD)*	α	n	Mean (\pm SD)*	α
Culture (A)	72	4.65 (\pm 1.11)	0.86	277	4.52 (\pm 1.63)	0.84
Infrastructure (B)	67	3.41 (\pm 1.23)	0.92	258	3.44 (\pm 1.47)	0.90
Alignment (I)	63	3.75 (\pm 1.06)	0.80	238	3.62 (\pm 1.50)	0.91
Accountability (II)	61	3.42 (\pm 1.22)	0.87	230	3.28 (\pm 1.47)	0.92
Communication (III)	54	3.58 (\pm 1.17)	0.88	220	3.14 (\pm 1.45)	0.91
Value & Visibility (IV)	52	3.63 (\pm 1.33)	0.87	213	3.34 (\pm 1.62)	0.88
Demand (V)	52	3.79 (\pm 0.90)	0.70	208	3.69 (\pm 1.48)	0.88
Multiple Mentoring Opportunities (VI)	52	3.46 (\pm 1.15)	0.89	199	3.46 (\pm 1.50)	0.92
Education & Training (VII)	51	3.10 (\pm 1.34)	0.94	191	3.22 (\pm 1.53)	0.94
Safety Nets (VIII)	51	3.54 (\pm 1.00)	0.80	189	3.60 (\pm 1.35)	0.87

*Measured on a 7-point scale (strongly disagree, disagree, somewhat disagree, neither-disagree-nor-agree, somewhat agree, agree, strongly agree) with higher scores indicating higher levels of the measured subscale

Table 4 Significant comparisons for the culture subscale A between schools in 2019

Scale	Sample sizes	<i>p</i> value	r. effect.size
Advertising, Communication, Marketing Strategy v. Nursing	6 v. 31	0.05	− 0.32
Arts & Sciences v. Nursing	7 v. 31	0.05	− 0.32
Business v. Finance	10 v. 8	0.04	− 0.48
Business v. Nursing	10 v. 31	0.00	− 0.48
Construction v. Nursing	10 v. 31	0.03	− 0.34
Finance v. Literacy & Adult Education	8 v. 5	0.04	0.56
Finance v. Mining Engineering & Manufacturing	8 v. 14	0.02	0.49
Health Sciences v. Nursing	26 v. 31	0.00	− 0.37
Human Services and Community Safety v. Nursing	12 v. 31	0.00	− 0.47
Literacy & Adult Education v. Nursing	5 v. 31	0.00	− 0.46
Literacy & Adult Education v. Transport	5 v. 8	0.04	− 0.57
Mining Engineering & Manufacturing v. Nursing	14 v. 31	0.00	− 0.54
Mining Engineering & Manufacturing v. Transport	14 v. 8	0.05	− 0.42
Nursing v. Student Services	31 v. 15	0.04	0.31

Table 5 Significant comparisons for the total mentorship culture audit scale between schools in 2019

Scale	Sizes	<i>p</i> value	r. effect.size
Arts & Science v. Mining Engineering & Manufacturing	7 v. 14	0.02	0.49
Construction v. Mining Engineering & Manufacturing	10 v. 14	0.05	0.40
Literacy & Adult Education v. Nursing	5 v. 31	0.04	− 0.34
Mining Engineering & Manufacturing v. Nursing	14 v. 31	0.00	− 0.47

Energy and Manufacturing. The School of Transportation scored higher when compared to Literacy and Adult Education, and Mining, Engineering and Manufacturing. Financial Services, as a non-academic department, scored significantly higher than Business, Literacy and Adult Education, and Mining, Engineering and Manufacturing. Schools and departments with lower relative scores versus others in the Culture subscale may represent parts of the organization where the foundations of a mentoring and learning organization culture have yet to be established successfully.

Comparing the total mentorship culture audit score in Table 5 shows differences between academic schools and departments, as well, with Nursing scoring significantly higher than Literacy and Adult Education and Mining, Energy and Manufacturing. Arts & Sciences, and Construction. Schools with higher relative scores of the mentorship culture audit overall may represent those that have more advanced mentorship and organizational learning cultures.

Qualitative findings

The qualitative portion of the study used focus groups and individual interviews to provide added depth and clarity to the survey results. In addition to questions regarding the perspectives on the overall organizational culture, questions addressed the foundational building blocks of mentorship culture and infrastructure, plus the hallmarks of

alignment, accountability, communication, value and visibility, demand, multiple mentoring opportunities, education and training, and safety nets, which form the structure for reporting qualitative findings (Zachary 2005).

Culture

Zachary (2005) defined the building block of culture as a measure of how the values and actions of mentoring align within the organization. Participants were asked about the organization's commitment to mentorship as an institutional priority, shown through actively promoted development opportunities and support. The results on the Culture subscale, as well as each of the five questions within, were higher above the mean than any other subscale, denoting that employees perceive a mentorship culture.

Participants generally saw the institution as positive, supportive, and a “friendly place to work.” However, it was also described as a workplace constrained by rules, schedules and too many meetings, leaving little time for individual mentoring.

It's a supportive organization in general, but not specifically to mentorship. People are supported, but not mentored. There is a lot of pressure from outside of the school, in the community, in the bigger organization, expectations to be involved in industry. A lot of pressure on the calendar. (Leadership)

Participants saw mentorship as not discouraged, but not specifically encouraged, within institutional culture:

There's so much potential. It's not like we're working in a culture where it's frowned on. (Staff)

It has to come from top down, the leadership has to show interest in supporting their staff to create a culture of [mentorship]. (Faculty)

Those in leadership and management positions were generally not seen as role models of learning or mentoring. Alternatively, leadership mentioned encouraging mentorship, especially of those with seniority or expertise, and being denied. Participants who spoke of mentors most often identified a direct colleague:

I feel that [the mentorship] I get here is better but that's only due to the person that I'm working with—she's kinda my work Mom, like she really has taken me under her wing and showed me everything, and that's not just because she was told to, or because it's a culture here, it's just her personality. (Staff)

Participants agreed that any mentorship culture came from individual personalities, not from any organizational resources, prioritization, or formalization.

Infrastructure

Infrastructure creates a foundation for a mentoring culture; its strength promotes ownership, continuity, momentum and sustainability. In order for this foundation to be built, Zachary (2005) suggested that a leadership commitment is required to ensure “reliable, suitable, sufficient financial, technological, human, and knowledge resources to support mentoring needs” (p. 52) and build a foundation.

In the view of participants, there is no formal mentorship infrastructure in this organization, although some programs for other purposes facilitated mentorship. Participants expressed concern that this informal mentorship might not be sustained over time. Without a formal mentorship infrastructure, employees may not be supported in their mentee or mentor roles. In one participant's words:

I think that there's a lot of mentoring relationships that are forming just naturally. Those relationships form in this place. It's just that they're not identified as a formal type of program. I don't know if there is any. (Staff)

Other participants had varied recollection of mentorship being included in their organizational orientation; however, while mentorship may have been discussed for some, for others, mentorship needed to be sought out:

There is really no orientation, policies, or procedures that I'm aware of anyways... and [it's] questionable on whether that's actually mentoring ... it's a little more with building a relationship face to face, so I wonder if that will change, the mentorship here. If you can't find supports, like you got to hit the ground running mid-September, you better be on your feet, and I think we're the type of people that we would just find it, I think we just latch onto somebody. (Faculty)

While not specific to mentorship, the organization has remained committed to supporting faculty in becoming instructors, since most have primary professional education. This included orientation programs on being a new instructor, a certificate program that can articulate to an education degree, and continuing education through the instructional development center.

Alignment

A paradox existed in the responses to questions about alignment. Alignment of mentorship is the integrity of processes, the result of strategies that are not add-ons, and the ripple effect resultant from regular communication (Zachary 2005). The mean result of this survey subscale revealed that ways of maintaining alignment may not exist. Practically, this was reflected in quotes from faculty who believed in mentorship and engaged in those processes, but expressed that mentorship was not supported by the organization.

[Leadership] are very good at promoting professional growth and development. But they need to allow their faculty or staff to have time built in to their schedules for that growth. Basically, if you want to be a global leading institution you need to offer your faculty and staff training so that they can be the best at their game. (Faculty)

Participants could not share a strategic outline for mentorship in the organization. They did speak of what they saw happening in the absence of intentional, structured mentorship,

Yeah, I would say it's not intentional, but we do see ones that are intentional. I think they've got a good thing going. I think there's some programs just by virtue of the folks in it, you do see some good stuff happening. Like they do take people on...all work together. But I don't see that organized structured mentorship as such. (Faculty)
Wise people are those that find their mentors, regardless of what their organization

is doing. (Faculty)

Faculty and staff comments regarding alignment of mentorship to goals of the institution tended to relate to working environments, team teaching, or mentors taking extra time to assist.

Participants in leadership positions provided specific examples of how they enacted mentorship between each other or for faculty and staff,

Informally-tons. I'm mentoring all the time, it guides my action. When chairs have a problem, I try to include reasons behind the solution in messages to them. To consider other's points of view. How do I present solutions so others recognize my values? And our Dean does the same thing to me. This is what we stand for and values that guide us. (Leadership)

The expectation appeared to exist that leaders would mentor each other and additionally, that training in mentorship at the leadership level would filter to faculty, staff and students. Alternatively, the perceptions revealed in participant quotes suggested limited contact or training in mentorship by leadership. Therefore, faculty perception of mentorship alignment may result from a personal expectation as professionals to assist, or a professional espousement within the role of teaching.

Accountability

The building block of accountability is a standard of mentorship, with feedback loops through goal setting and evaluation (Zachary 2005). In general, participants responded that there was a shared responsibility to provide and take mentorship:

Sometimes the best time to do mentoring is when we're busy, but not if we have no down time to offer that actual support, and not making the other person feel like they're putting someone out. 'Cause I know that's always like a hurdle, as if someone wants that support but they're worried about asking because they can see that the person is running at full octane. So that would be where the shared responsibility is, someone giving, making sure that there is space, and enough person power to be committed and stick to what they've agreed to. (Faculty)

Participants expressed that lack of formal accountability requirements for mentorship meant employees were wary of making already busy people, busier. Benchmarks of accountability, then, became tied to outputs such as student success and progress in their programs, or time acknowledgment on teaching portfolios.

Participants suggested that if leadership provided direction for, and acknowledgment of, mentorship, then mentorship goals were defined and the process of mentorship improved, leading to departments functioning better. However, no participant concretely mentioned a link to institutional operating plans or measurement/evaluation in any form. Comments included:

I was a part of the leadership fundamentals [training] program and so I was assigned a mentor. There was a more experienced academic chair who was my mentor—and now I'm the outgoing academic chair, but I'm mentoring another program head. So, I'm in a formal mentorship. We're really strongly trying to advocate for

that in our middle leadership area. (Leadership)

I really think it depends on the culture within the school or department. So, on my campus, we have a lot of new faculty teaching in the School of Business. And as far as I know, they have been helping each other because that culture kind of exists. They're quite tight. But I'm not sure about other departments. I don't really see that so I would say offering to mentor each other without being asked—it's rare, I would say, rare. (Faculty)

Participant responses showed a clear disconnect between the expectation of mentorship for leadership and actual mentorship by faculty and staff. Some participants experienced mentorship tied to leadership training programs and were accountable to ensuring that occurred, whereas faculty and staff mentorship was tied to informal culture that had been cultivated amongst themselves.

Communication

For Zachary (2005), communication was strategic, transparent and showcased organizational commitment. Participants shared about the program-level mentor–mentee examples they have experienced or expected amongst each other,

Mentorship would be providing guidance and maybe insight into potential problems or situations. You know, this is what we tried in the past, this is maybe something you should consider. It's more of a guidance rather than kind of a lead. (Faculty)

Communicating through mentorship required insight on the part of the mentor for shared learning and faculty success,

There has to be a willingness to ask questions and to give answers. It's not even simple answers you know, it's really trying to understand what is this instructor really looking for and what can I tell him that would be a benefit to him? It's not just simply you have to do this, cause sometimes it's not a question of, you know, there's a little checkbox. Filling out a form is straightforward, but dealing with a student that potentially has some sort of learning disability? That's where you kind of sit down and try to understand more about the instructor's capabilities of interacting. (Faculty)

However, as per Zachary (2005), these may be examples of desired learnings regarding how to mentor that reflect the individual, not the organizational approach, per se. Participants could not recall specific examples of institutional messages connected to mentorship. One participant described institutional communication on mentorship as “*There is a message in silence.*”

As noted in the survey results, the Nursing experience may be unique because of a history of mentorship embedded for a decade or more. Faculty could comment on their own experience of mentorship, as well as reflecting on the impact of messages to the organization,

Because every person is assigned a mentor at hire, and I was buddied with people other than my mentor for, for at least one clinical block, so that is another sign that they believe that you know coaching and mentorship is important. But what prob-

ably needs to be a little more intentional, and this is probably where the incentivization and the buy-in comes from, is that mentors need to be assigned based on the messages about the organization that will be given to the new hire, because they can be very negative sometimes. As well as on the expertise or level of teaching prowess or experience. You would want to attract people to the program who believe in mentorship but also who are expert teachers. (Faculty)

Her comments also reflect how an organizational approach to communication impacts recruitment and retention, which has been a long-standing nursing concern, in practice and academia.

Value and visibility

Participants were asked about the value and visibility of mentorship in their departments and the organization. While Zachary's (2005) examples of values and visibility are potentially individual actions, such as emails, role modelling, presentations, and media, the combination is a perpetually repetitious sense of reward and recognition and visibly making mentorship the norm. With the subscale results sitting near the mean, participants revealed that mentorship adds incredible value to the organization, but organizational practices were not visible:

Mentorship in this organization isn't valued enough. You may have time but other things are higher priority because of the inherent value those have, as opposed to, the value that's put on your time spent helping someone else. You're gonna get credit for doing prep time on your own courses, but you're not gonna get credit for the time you're helping someone else, and that's, to me, a flaw in the system. (Faculty)

Participants saw mentorship as supporting employees to focus on necessary tasks, raising confidence and engagement, and influencing career paths. Personal values or professional need encouraged people to be mentors or seek out mentorship, yet the institution did not showcase valuing mentors.

Participants explained that mentorship is often individually, rather than institutionally, recognized and practiced.

I told them that this was so beneficial to me and this person really changed the trajectory of my teaching or helped it. We have to do better. She needs to know how. You know, I tried to tell her but as an organization they should appreciate her too for what she did. (Faculty)

Personal affirmation, learner acknowledgements, attention in the employee newsletter, or teaching awards may serve as stop-gap acknowledgement. In the end, "If it [mentorship] is done well...watch the magic happen." Participants expressed great potential in properly valued and encouraged mentorship.

Demand

Zachary (2005) described demand as norming mentorship. Mentees would seek out relationships, utilize available training and resources and, when the learning needs are met, revise the goals and find new mentors. Demand is a perpetual successful sustained cycle. Participants describe mentorship as something that staff and faculty desire.

I'm taking the initiative, and she's taking the initiative, like we're working together in this mentorship. But that doesn't mean I'm gonna get her job, like I'm being trained to take over but then someone's gonna come in and bump me out of that job, even if I'm the one...(Staff)

Participants conveyed their enthusiasm for mentoring in the actions or the outcomes,

Builds self-esteem, providing someone with guidance, knowledge and experiences to help them and motivate them. Getting to help others, to pay it forward. (Leadership)
There's so many great people within this organization. I don't know how you fish em out or, you know, get them cause a lot of people are doing it without even... (Staff)
Well they don't consider themselves a mentor cause you know they just do, they just are helpful, and they are your friend, so that's what they do. (Faculty)

The sense of mentors giving and creating opportunities was quite common among participants, especially in relation to informal relationships. Zachary's (2005) questions on demand include the positive buzz about mentorship and the request to increase mentoring efficacy and opportunities. A mentorship buzz and increased efficacy were not mentioned during interviews or focus groups, suggesting mentorship is not a robust conversation, nor is learning about mentorship a priority, demonstrating a disparity between desire and availability.

Multiple mentoring opportunities

Participants were specifically asked what formal or informal mentorship opportunities existed. Zachary (2005) not only described the variety, but the delivery and methods of learning and supporting mentorship. The quotations throughout showed that minimal formal opportunities exist, yet convey that faculty, staff and leadership individually strive to support others,

Formally, leadership fundamentals [training program] provides a mentoring opportunity. Informally, there are tons of opportunities. (Leadership)

Others sought formal opportunities without success because of the structure of the organization,

I was program head for a year. I know that program heads go through certain trainings, like can I do some of those trainings before so that I can have them ready for when I become program head? I've been absolutely denied. (Faculty)

This may reflect the question regarding mentoring being available at point of need and possibly a reason for a lower than the mean score, noting a gap in supports for faculty.

Other quotations illustrated diverse mentorship and learning needs across programs and age groups, as well as delivery and curriculum development models.

When I was a newer instructor, I'd seek out the opinion of a lot of people. Just because I have a few years doesn't mean I know everything but I think for the topics I cover my understanding is pretty solid so I don't really need to go out of my comfort zone. I'm going to be doing a little bit more in the future with online content so I think that's a new frontier for me so I probably will be seeking more assistance.

(Faculty)

Having broad opportunities to meet diverse learning needs received one of the lowest scores in the entire survey. Turnover of faculty also affects the opportunity to teach content more than one time and to learn from individual experience. Therefore, the need to successfully navigate these organizational processes with mentorship may support stability.

Education and training

Zachary (2005) described this hallmark as a strategic network of resources and opportunities to engage in development, training and renewing commitment to organizational expectations of mentorship. An institutional culture of ‘sink or swim,’ rather than training and mentoring, was identified as a negative for those interested in moving into positions of more responsibility. Available training was identified as focused on teaching skills rather than “*people development competencies*”

What I needed was to learn the people in the organization. An intro mentor so that I could work off, bounce off of, just to learn the people and the processes and how to maneuver through that. And that's hard, that's different. (Faculty)

In combination with seniority or other contract-based processes, participants saw a focus on teaching results for faculty, and a practice of staff moving into supervisory roles without leadership skills considered in selection or supported through mentorship.

I know one of them has been here for, I think he was actually invited to the long service because he has been here for 10 years. He has been program head for at least five years. This year he took his leadership training. He was a teacher before he moved up to program head. I was joking with him like, oh how was leadership training and did it help. He was like, really great stuff in there. Would have been useful before I became program head. (Faculty)

If learning opportunities existed, often they could not be accessed. When opportunities were provided, modifications were required to reduce barriers for faculty and staff,

[Learning centre] has been really good the last couple of years about trying to fit like the sessions that they run so that we can attend, but even then our lunch hour is different. Our lunch hour runs from 1130 to 1220 so uh, and so we don't even have an hour. Because the number of hours that we need to get in with our students. So it's really hard to go to any sort of session that is offered. (Faculty)

Further suggestions for mentorship development included: a one-day course, held in person rather than online, to explain expectations and encourage mentorship; making assigned mentorship part of job duties; sharing areas of expertise to allow people to seek out experts within their departments; and creating events to encourage networking.

Safety nets

Zachary's (2005) safety nets are the support and strength of a mentorship culture. Safety nets support mentor–mentee pairs, evaluate roadblocks for the organization such as human or fiscal resources and actively sustain mentorship programs. Safety

nets are often relational, helping employees realize expectations and meet needs. The most frequent initial response to the interview question about safety nets was that counselling was available to any employee. More insightful comments revealed that it was not the reactivity of the moment that was of concern, but how to deal with reflections on the situation, as this faculty stated, who realized their negative perception of a student who was always late:

I wondered why she's always late. Well she's walking an hour and a half each way in the winter. Everybody's got a story. But that's where the mentor, you know, if that mentor wouldn't have told me that... (Faculty)

This example demonstrated program-supported mentorship—a safety net—where a mentor supported the mentee in working through a bias. These relational moments requiring forthright discussion support the need for physical space for confidential interactions.

Mentoring relationships need to be supported and require commitment and work. Concerns may exist in the pairing, the personality, or the expectations. Organizational safety nets, which relate to each of the other hallmarks, can assist faculty in working through conflict or finding other resources.

I really trusted her. I could be really forthcoming with her so I felt safe with her but if our relationship had deteriorated and you know maybe we weren't getting along or whatever or we differed in our opinion on what to do or something. I don't know what we would have done. I have no idea. (Faculty)

While participants expressed that mentorship safety nets, in the form of policies, procedures, or guidance, were generally unavailable, they did respond positively regarding mentor–mentee confidentiality. Therefore, even in the lack of formal structures, informal mentorship norms were embedded.

Integration of mixed method results

In response to the three research questions, integration of the quantitative results and qualitative findings is provided. The first research question was whether a mentorship culture was perceived across the organization. Results from the quantitative survey and qualitative participant descriptions align to support several key ideas. There is interest in mentorship, particularly in being a mentee, within the institution. When participants spoke of mentors, they acknowledged that they were not formally mentors, or would not label themselves as such. Survey responses to the Culture subscale continue to be the highest of any other subscale showing that participants agree a culture of mentorship exists. However, as with results from 2013, the mentorship culture remains just above the mean at 4.52 on a 7-pt Likert scale. The qualitative data showed the experience of mentorship is formally structured for those in leadership positions and informally structured for faculty and staff. Leadership expressed the perception that mentorship learned would filter to faculty and staff. Alternatively, faculty and staff voiced the characteristics sought when seeking a mentor and the personality traits expected of mentees to find professional supports.

Research question 2 addressed, what supports or gaps existed in the mentorship culture? A slight perception of a mentorship culture was expressed by participants; however, it is difficult to state mentorship is the norm in the organization, given that most subscale results for Infrastructure and all the hallmarks are just around the mean. Quantitative responses indicated participants felt there were people in place to support mentorship, that mentorship was aligned with the institutional plan, and that mentoring has a positive value for the organization. In contrast, gaps existed in monetary resources, processes, communication with a shared vocabulary, and senior leadership promoting and owning mentorship for the organization. During interviews and focus groups, participants did share that some programs had structures in place for mentorship pairing, and mentorship was not dissuaded; however, no participant spoke of any learning about mentorship nor rewards or acknowledgement for mentors.

The third research question asked, how is mentorship supported among and between faculty, leadership and professional services? Despite the lack of formal infrastructure, there was support and activity for informal mentorship, along with attempts to share resources and supports between these cohorts. Some schools and departments, notably Nursing, Transportation and Financial Services, scored significantly higher on Culture than other schools and departments. Non-academic staff scored higher on the Culture subscale than faculty or leadership. Within the focus groups and interviews, participants provided examples of seeking out mentorship and of appreciated mentors, often direct colleagues who had worked in the organization for a long period, as compared to colleagues with content knowledge or leadership.

Discussion

Without the necessary infrastructure, mentoring programs and practices cannot be implemented or desired effects noticed. Access to supports and resources is influenced by organizational culture (Gibson 2006; Singh et al. 2014). Participants in this study, spanning four campuses, consistently described needing access to supports and resources. Conversations focused on where to find much-needed information and the process of seeking mentors, related to orientation, practical skills to function in the organization, or mentorship for career planning (Foote and Solem 2009). An organizational culture that is creative and collaborative encourages the development of mentorship policies and supports for faculty and staff (Singh et al. 2014). For individuals in this organization, providing and seeking out mentorship was top down or bottom up. While leadership or grassroots initiatives intend on a culture spreading, the ripple effect was not apparent in this organization (de Vries et al. 2006). Individuals may provide or seek out mentorship, and mentorship was formally organized for leadership members; however, it went largely unsupported by the organization for faculty or professional services. Support from senior staff and faculty such as the academic unit heads influence the success of mentoring in an institution (Fountain and Newcomer 2016).

Participants expressed that mentorship was valuable, could positively influence individuals and supported the institutional plan. This aligns with previous studies showing that mentorship can influence teaching, performance, research, and career progression (de Vries et al. 2006; Fountain and Newcomer 2016; Jackevicius et al. 2014; Tareef 2013; Waller and Shofoluwe 2013). This may translate to organizational commitment (Gwyn

2011) as some employees had been in the organization for a long time and spoke highly of the value of the organization to students, as well as their individual achievements as educators (Chung and Kowalski 2012).

Where mentorship was available, participants noticed that it provided them with emotional and tactical support. They were able to focus on what was necessary to be successful in their positions. This is suggestive of immediate issues rather than mentorship in professional development (Jackson et al. 2015). Further research, comparing practices of academic and non-academic departments, could reveal important differences to guide future mentorship support efforts. Of note is the Nursing and Health experience of higher scores on the Culture subscale. As noted in Sheridan et al. (2015), Nursing had built an infrastructure and mobilized human resources to sustain mentorship for almost a decade prior to that initial mentorship culture audit. Findings from this study can now feed further evaluation of mentorship and culture within other academic areas and departments.

What was highlighted through this study, as in previous research, is that mentorship requires more time and resources than what institutions often provide (Waller and Shofoluwe 2013). Mentorship must be valued by organizations and be made accessible to employees through a supported effort, as opposed to an ad-hoc effort from champion individuals. Mentorship programs that are collegial and collaborative learning environments, reduce the silos and isolation of new employees and draw attention to an organizational commitment to career development (Wyllie et al. 2020). Without addressing organizationally driven building blocks and hallmarks, it will be difficult to address the current mentorship challenges, such, lack of opportunities, time constraints, unclear expectations, decreased motivation, insufficient resources, and lack of rewards, as well as, as disparity in mentor pairing in relation to gender and underrepresented groups (Gibson 2006; Fountain and Newcomer 2016). As noted by Harker et al. (2019) formal longitudinal assessments of mentorship programs underscore the needs of employees and thus, appropriate redirection of resources. While research has also noted the challenge of measuring success of mentorship programs by scholarly work, achievement of promotion, or satisfaction scores over time (Harker et al. 2019), at an organizational level, success in building a mentorship culture could be measured by organizational citizenship behaviour. The value and visibility of mentorship and the philosophical impetus behind the development of employees results in a reciprocal relationship of promoting organizational values and appreciating employee capacity, as well as sustainability of the organization and the wider community (Akpey-Mensah and Muchie 2019).

The limitations of this study included poor recruitment for the survey and the audit tool. The research team maintains that recruitment for this survey was affected by annual organizational evaluation surveys and a lack of research culture in the organization. The institution is a relatively new polytechnic and, therefore, research is not as pervasive as in a university environment; however, we acknowledge that organizational research is not the norm for any institution. As this research is disseminated, becomes commonplace, and is replicated, the response rate will increase. A final limitation or consideration is the Mentorship Culture Audit (Zachary 2005). The audit is lengthy as both a survey and when engaging in interviews seeking perceptions of 10 concepts. There was apparent survey fatigue in both 2013 and the current collection of data. Specific scripted

questions noting the hallmark or building block may have collected more relevant data. However, that would also have affected the conversational nature of the interviews and focus groups.

Conclusion

Building on a 2013 survey of the schools of Nursing and Health Sciences at Saskatchewan Polytechnic, this survey of the full institution shows through comparison that efforts within the school of Nursing, in particular, have built support for a mentorship culture. Staff and faculty throughout the organization want to have the benefits of mentorship, and notice the lack of availability and support for a mentorship culture.

Some schools and departments showed a higher level of mentorship culture. The mentor relationships developed as a side benefit within mandatory training programs were noted, appreciated, and carried forward. Lessons for the institution can be drawn from these successes. Enhanced supports need clear direction and involvement from management, as some leaders revealed that they were invested in employees by making mentorship support readily available. Enhanced benefits of mentorship for new employees, developing skills, and succession planning, are available through a more organized and concerted effort to build on the existing, largely informal, culture of mentorship in the institution.

Zachary (2005) suggested that the Mentorship Culture Audit promoted systemic thinking. Engaging in an organizational level, 'big picture' assessment of mentorship, promoted a view to sustainability. Areas of culture strength can be leveraged in coordination with evaluating where they scored well in the audit outcomes. As the culture shifts in the organization, the hallmarks that are less understood or were not prioritized can be built into the infrastructure. The original assessment of Nursing and Health Sciences showed how a mentorship culture can be sustained. The comparison to the organization as a whole does highlight the siloed approaches within disciplines and bureaucratic divides. However, an organizational assessment reduces barriers by showing the inroads that were already developed with informal networking. Formalizing these processes narrows the gaps and creates anchors for a mentorship culture to take hold. This research was replicated five years apart, the mentorship structures were built over a decade ago. As Zachary (2005) stated, a mentorship culture takes time and flexibility; what is required is a vision of the organization when relationships are cultivated.

Acknowledgements

Thank you to Reid McDonald at Black Spruce Analytics for statistical analysis and reporting.

Authors' contributions

The study was conceptualized by NHM and designed by NHM, BG and TCR. All authors contributed to data collection. Qualitative data was coded and interpreted by NHM, BG and EE. Integration of quantitative and qualitative occurred with all authors. All authors have contributed to writing and revising the manuscript. All authors read and approved the final manuscript.

Authors' information

TCR was an employee of Saskatchewan Polytechnic for the duration of the study.

Funding

This research was funded by an internal Saskatchewan Polytechnic grant from the School of Nursing and Health Sciences.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations**Competing interests**

The authors declare that they have no competing interests.

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Received: 20 February 2021 Accepted: 3 June 2021

Published online: 07 June 2021

References

- Akpey-Mensah TL, Muchie M (2019) Innovative mentorship programmes for female academics in two African universities of technology via Ubuntu: an exploratory study. *Gender & Behaviour* 17(4):14213–14223
- Blauvelt MJ, Spath ML (2008) Passing the torch: a faculty mentoring program at one school of nursing. *Nurs Educ Perspect* 29(1):29–33
- Chung CE, Kowalski S (2012) Job stress, mentoring, psychological empowerment, and job satisfaction among nursing faculty. *J Nurs Educ* 51(7):381–388. <https://doi.org/10.3928/01484834-20120509-03>
- de Vries J, Webb C, Eveline J (2006) Mentoring for gender equality and organisational change. *Empl Relat* 28(6):573–587. <https://doi.org/10.1108/01425450610704506>
- Foote KE, Solem MN (2009) Toward better mentoring for early career faculty: results of a study of US geographers. *Int J Acad Dev* 14(1):47–58. <https://doi.org/10.1080/13601440802659403>
- Fountain J, Newcomer KE (2016) Developing and sustaining effective faculty mentoring programs. *J Public Aff* 22(4):483–506. <https://doi.org/10.1080/15236803.2016.12002262>
- Gibson SK (2006) Mentoring of women faculty: the role of organizational politics and culture. *Innov High Educ* 31(1):63–79. <https://doi.org/10.1007/s10755-006-9007-7>
- Gwyn PG (2011) The quality of mentoring relationships' impact on the occupational commitment of nursing faculty. *J Prof Nurs* 27(5):292–298. <https://doi.org/10.1016/j.profnurs.2011.03.008>
- Harker K, O'Toole E, Keshmiripou S, McIntosh M, Sassen C (2019) Mixed-methods assessment of a mentoring program. *J Libr Adm* 59:873–902. <https://doi.org/10.1080/01930826.2019.1661745>
- Heiberger RM, Holland B (2015) *Statistical analysis and data display: an intermediate course with examples in R*, 2nd edn. Springer, New York
- Hothorn T, Hornik K, van de Wiel MA, Zeileis A (2006) A lego system for conditional inference. *Am Stat* 60(3):257–263. <https://doi.org/10.1198/000313006X118430>
- Houston M (2019) Faculty mentoring programs at academic institutions: A systematic literature review and suggestions for future mentoring programs. *IJETMR* 6(10):24–30. <https://doi.org/10.29121/ijetmr.v6.i10.2019.457>
- Jackevicius CA, Le J, Nazer L, Hess K, Wang J, Law AV (2014) A formal mentorship program for faculty development. *AJPE* 78(5):100. <https://doi.org/10.5688/ajpe785100>
- Jackson D, Peters K, Andrew S, Daly J, Gray J, Halcomb E (2015) Walking alongside: a qualitative study of the experiences and perceptions of academic nurse mentors supporting early career nurse academics. *Contemp Nurse* 51(1):69–82. <https://doi.org/10.1080/10376178.2015.1081256>
- Leech NL, Onwuegbuzie AJ (2010) Guidelines for conducting and reporting mixed research in the field of counseling and beyond. *J Couns Dev* 88(1):61–69. <https://doi.org/10.1002/j.1556-6678.2010.tb00151.x>
- R Core Team (2018) *R: a language and environment for statistical computing*. <https://www.gbif.org/tool/81287/r-a-language-and-environment-for-statistical-computing>. Accessed 18 Feb 2021
- Revelle W (2015) *Psych: procedures for personality and psychological research*. R package version 1.5.1. Northwestern University, Evanston
- Saskatchewan Apprenticeship (2021) What is apprenticeship? <https://saskapprenticeship.ca/what-is-apprenticeship/#:~:text=Apprenticeship%20training%20is%20a%20structured,one%20of%20Saskatchewan's%20designated%20trades.&text=Once%20an%20employer%20decides%20to,the%20employer%2C%20and%20Sask%20Apprenticeship.> Accessed 29 May 2021
- Sheridan LMM, Hubbard Murdoch N, Harder E (2015) Assessing mentoring culture: Faculty and staff perceptions, gaps, and strengths. *CJHE* 45(4):423–439. <https://doi.org/10.47678/cjhe.v45i4.184938>
- Singh MD, Pilkington FB, Patrick L (2014) Empowerment and mentoring in nursing academia. *Int J Nurs Educ Scholarsh* 11(1):101–111. <https://doi.org/10.1515/ijnes-2013-0070>
- Tareef AB (2013) The relationship between mentoring and career development of higher education faculty members. *Coll Stud J* 47(4):703–711
- Waller LS, Shofoluwe MA (2013) A qualitative case study of junior faculty mentoring practices at selected minority higher educational institutions. *J Technol Manag Appl Eng* 29(3):2–11
- Wyllie A, Levett-Jones T, DiGiacomo M, Davidson PM (2020) An evaluation of early career academic nurses' perceptions of a support program designed to build career-resilience. *Nurs Educ Pract* 48:1–7. <https://doi.org/10.1016/j.nepr.2020.102883>

Younas A, Parveen Rasheed S, Zeb H (2020) Using legitimization criteria to establish rigour in sequential mixed-methods research. *Nurse Res* 28(3):44–51. <https://doi.org/10.7748/nr.2020.e1727>

Zachary LJ (2005) *Creating a mentoring culture: The organization's guide*. John Wiley & Sons, Hoboken

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