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# Disparate opinions on the value of Vice Chairs of education in Departments of Surgery: A national survey of Department Chairs and other surgical education stakeholders

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ABSTRACT

*Background:* The position of Vice Chair of Education (VCE) is increasingly common in Surgery Departments. The role remains ill-defined. The purpose of this study was to explore perceptions of Department Chairs (DCs) and Other Education Stakeholders (OESs) regarding the VCE role.
*Methods:* DCs and OESs at institutions with a VCE were surveyed. Descriptive statistics and cross-tabulations were calculated (SAS V9.4).
*Results:* The overall response rate was 25% (166/666). There were significant differences in whether DCs and OESs agree that the VCE supports others in fulfilling educational roles (95.2% vs 49.5%, $p = 0.0002$), is critical in achieving education missions (90.5% vs 56.6%, $p = 0.0032$), enhances the quality of education (95.3% vs 65.7%, $p = 0.0174$), and is important to education teams (95.0% vs 68.7%, $p = 0.0464$).
*Conclusions:* DCs value the VCE role more so than OESs, whom VCEs support. In order for VCEs to be effective educational leaders in Departments of Surgery, the needs of key stakeholders deserve further clarification.



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## Introduction

Chairs of Departments of Surgery are responsible for achieving excellence in the tripartite mission of academic medical centers, including the clinical, research, and education domains, and to do so must provide effective leadership through collaboration and cooperativity, humanism and mentorship, and operational efficiency.[1] It has become common for Chairs of Departments to appoint Vice Chairs of Clinical Operations and Research to support these missions. Importantly, achieving excellence in the education mission presents unique challenges. Surgical education has undergone extensive changes over the past two decades. Advances in technology, sicker patients, adjustments to duty hours, and expanding program requirements from accrediting bodies, have made it increasingly complex to ensure excellence across the continuum of medical education.[2] To address this need, the position of Vice Chair of Education (VCE) has become increasingly common in Departments of Surgery across the United States, with the number of such positions doubling from about 30 ten years ago, to over 60 today.[3,4]

In 2012, three-quarters of VCEs were the first to hold the

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position and just one-quarter reported that they had a job description.[5] There has been improvement in the number of VCEs reporting a job description in recent years, with the vast majority of respondents to one survey (88%) indicating that their job responsibilities are appropriate.[4] This suggests that the VCE role may be more well-defined today, at least from the perspective of VCEs themselves. However, the perceptions of other surgical education stakeholders regarding the value of the VCE role have not been described. The individuals who are most invested in the activities, leadership, and overall effectiveness of the VCE include the Department Chair (DC), as well as other educational leaders across the Department, such as residency and fellowship Program Directors (PD) surgery Clerkship Directors (CD) and Education Scientists (ES).

It is unclear to what degree the VCE role is meeting the needs of educational stakeholders in Departments of Surgery. Therefore, we sought to explore the perceptions of these stakeholders regarding the role of the VCE. We surveyed DCs and other educational leaders in Departments of Surgery to explore the responsibilities of the VCE, the degree to which the VCE adds value to achieving excellence in the education mission of the Department, and any differences in perceptions between the stakeholder groups.

## Methods

### *Study population*

In order to investigate the views of key stakeholders on the role and value of the VCE, two study populations were identified and defined. The VCE position is a Departmental leadership role that is generally intended to support the DC in carrying out the education mission.[3] Therefore, the key stakeholders who may engage with the VCE include the DC, as well as other educational leaders, such as PDs (both residency and fellowship), CDs and ESs. Importantly, PDs across all surgical specialties within the Department may interact with the VCE and have an interest in the role and activities of that individual. Therefore, we defined two distinct populations for this study: 1) Chairs of Departments of Surgery and 2) Other Educational Stakeholders across all specialties in a Department of Surgery.

Next, we determined that the study population of interest would include stakeholders with direct professional contact with a VCE in their own Department of Surgery. We utilized a list of VCEs from across the United States that was previously compiled by the study authors to identify Departments of Surgery that currently have an appointed VCE. We then obtained email contact information for DCs, PDs and ESs from publicly available websites. In the case of PDs, this list was obtained from the ACGME website. We found that contact information for CDs was rarely available on program websites. Therefore, we engaged the Association for Surgical Education (ASE) Committee on Clerkship Directors to distribute the survey to all CDs without specifically being able to target those that have a VCE in their department.

### *Survey development*

Two distinct but related survey instruments were developed to query each of the two different stakeholder groups. The survey instruments were developed in accordance with best practices for developing surveys in medical education research.[6] We began with a review of the literature on VCEs across medical specialties. Existing questionnaires were reviewed by 2 study authors (SH and BKS) for relevance and items were adapted to address our research questions and study population.[3,5,7,8] Several of the study authors are or have served as VCEs and thus provided content expertise in the development of survey items. Survey A was developed for DCs and survey B was developed for OESs as defined above (Appendix A and B respectively). The questions in survey A and survey B were aligned to enable direct comparison of responses between the two groups. Several unique questions were asked of the DCs (Appendix A). Content validity was ensured through group discussions amongst the study team. Cognitive interviews were conducted with 2 general surgery faculty to ensure clarity of the survey items, which were modified based on this feedback.

### *Survey instruments*

The 26-item surveys included questions related to the qualifications of and support provided to the VCE, the roles and responsibilities of the VCE, interactions of the stakeholders with the VCE, and the value that stakeholders ascribe to the VCE position. Open-ended, free-text responses were included to allow for unanticipated responses.

### *Survey administration*

The survey instrument was created and managed through the Research Electronic Data Capture program (REDCap, University of Utah). From July through September 2019, an email with a cover letter describing the study and an electronic link to the survey was sent to the study populations. DCs, Fellowship and Residency PDs, and ESs were contacted directly via email. The survey was distributed to all surgery Clerkship Directors through the ASE Committee on CDs. Data were collected using REDCap and non-respondents were sent reminder emails at approximately 2 and 4-week intervals following the initial invitation. The study was deemed exempt by the Institutional Review Board at Indiana University.

### *Data collection and analysis*

REDCap data extraction was performed following completion of the survey response window and all results were input into SAS 9.4 (Cary Institute, NC.). For aligned survey questions, responses were combined from the Department Chairs and Other Education Stakeholder groups. Descriptive statistics were reported as frequencies and percent. Study cohorts were formed to compare the Department Chair to the Other Education Stakeholders for aligned questions. The chi-squared and Fisher's exact tests were performed, and p values were computed. All tests were two-sided and p values $< 0.05$ were considered statistically significant.

## Results

The overall response rate was 24.9% (n = 166/666), including 38.2% of DCs (n = 21/55), 23.5% of PDs (90/383), 52.2% of ESs (12/23), and 21.0% of Clerkship Directors (43/205) (Fig. 1). Of the OESs, 13.3% (n = 14/105) reported that they held the role of VCE, in addition to their other identified educational role of PD, CD, or ES. PDs represented a variety of surgical specialties including general surgery (23/90, 25.56%), vascular surgery (14/90, 15.56%), thoracic surgery (12/90, 13.33%), and urology (9/90, 10.00%), among others.

### *VCE qualifications and support*

Most respondents reported that the VCE in their Department has an MD degree (DCs 20/21, 95.2% and OESs 99/102, 97.1% respectively). Other degrees reportedly held by the VCE included PhD (DCs 2/21, 9.5%; OESs 3/102, 2.9%), and Master's Degree (DC 2/21, 9.5%; OES 6/102, 5.9%). The majority of OESs reported that the

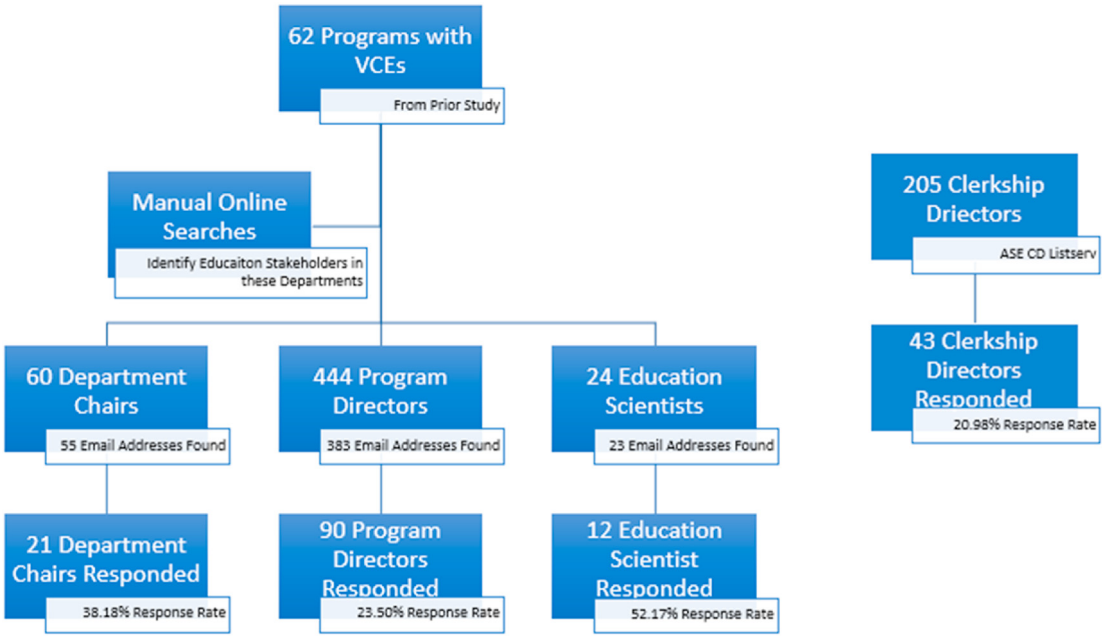


**Fig. 1.** Identification of study population and response rates.

VCE position in their Department had been present for 1 to <5 years (43/101, 42.6%), suggesting that the role remains relatively new in many Departments.

DCs were asked several questions that were not asked of the OESs. These questions pertained to information that they as DCs have specific access to or knowledge of due to their leadership position. DCs reported that they had chosen to maintain or create the role of VCE to enhance educational infrastructure (19/21, 90.5%), manage educational issues (16/21, 76.2%), act as a liaison to educators across the department (15/21, 71.4%), and to identify and support faculty educators (15/21, 71.4%). When asked what criteria were used to select the VCE, responses included established institutional reputation in education (14/21, 66.7%), established national reputation in education (11/21, 52.4%), publications in education (9/21, 42.9%), and previously served as a program director (7/21, 33.3%). Other responses noted less commonly were advanced degree in education (4/21, 19.0%), rank (4/21, 19.0%), and current PD (1/21, 4.8%). DCs most commonly reported providing 0.2 FTE support, either as direct salary support or clinical buy-down, to their VCE (7/21, 33.3%). DCs were also asked how much total administrative support they provide to the VCE. Responses were varied with administrative FTE support not being provided at all (2/21, 9.5%) to greater than 5 FTE provided (3/21, 14.3%). Finally, nearly all DCs responded that their VCE has an active role in their Departmental leadership team (20/21, 95.2%).

71.4% of DCs (15/21) reported that their VCE does manage an educational budget, while just 30.7% (31/101) of OESs believed this to be true and 43.6% (44/101) were uncertain.

One third of OESs believe that their VCE has a job description (40/104, 38.5%) while just over half reported uncertainty about whether their VCE has a job description (54/104, 51.9%). Nearly half of DCs reported that their VCEs had a job description (10/21, 47.6%) with the majority of those job descriptions being written by the DC (6/10, 60%). This demonstrates that more VCEs have a job description than is recognized by OESs.

*VCE roles and responsibilities*

DCs were asked what the roles and responsibilities of the VCE *are* while OESs were asked what they *should* be. Most respondents agreed that the responsibilities of the VCE include or should include oversight of educational programs (DCs 20/21, 95.2%; OESs 91/102, 89.2%), strategic planning for educational programs (DCs 19/21, 90.5%; OESs 88/102, 86.3%), faculty development related to education (DCs 19/21, 90.5%; OESs 86/102, 84.3%), promotion of educational scholarship (DCs 18/21, 85.7%%; OESs 78/102, 76.5%), mentorship of education program leaders (DCs 17/21, 81.1%; OESs 82/102, 80.4%), and possess expertise as an educator (DCs 17/21, 81.0%; OESs 78/102, 76.5%). Responsibilities of a VCE that were endorsed less frequently include developing new education programs (DCs 14/21, 66.7%; OESs 74/102, 72.5%), monitoring the department education budget (DCs 12/21, 57.1%; OESs 72/102, 70.6%), performance review of education program leaders (DCs 11/21, 52.4%; OESs 69/102, 67.6%), and developing department education budget (DCs 9/21, 42.9%; OESs 70/102, 68.6%) (Fig. 2).

*Interactions with VCEs*

DCs and OESs were asked for what issues they contact the VCE. The most frequent reason for a DC to contact the VCE was program accreditation issues (18/21, 85.7%), followed by to serve as a liaison to faculty (16/21, 76.2%), student/resident mistreatment issues (15/21, 71.4%), student/resident wellness (14/21, 66.7%), advice on resource allocation (14/21, 66.7%), and advice on recruitment, retention, and promotion of faculty with career focus on education (13/21, 61.9%). OESs were also asked for what reasons they contact the VCE. The most frequent reason for OESs to contact the VCE was requests for resources (46/93, 49.5%). Other reasons to contact the VCE were program accreditation issues (37/93, 39.8%), students/resident mistreatment issues (35/93, 37.6%), student/resident wellness issues (35/93, 37.6%), to request an advocate to the DC (35/93, 37.6%), support of personal career development (29/93, 31.2%), and for other reasons (33/93, 35.5%). Other reasons were indicated

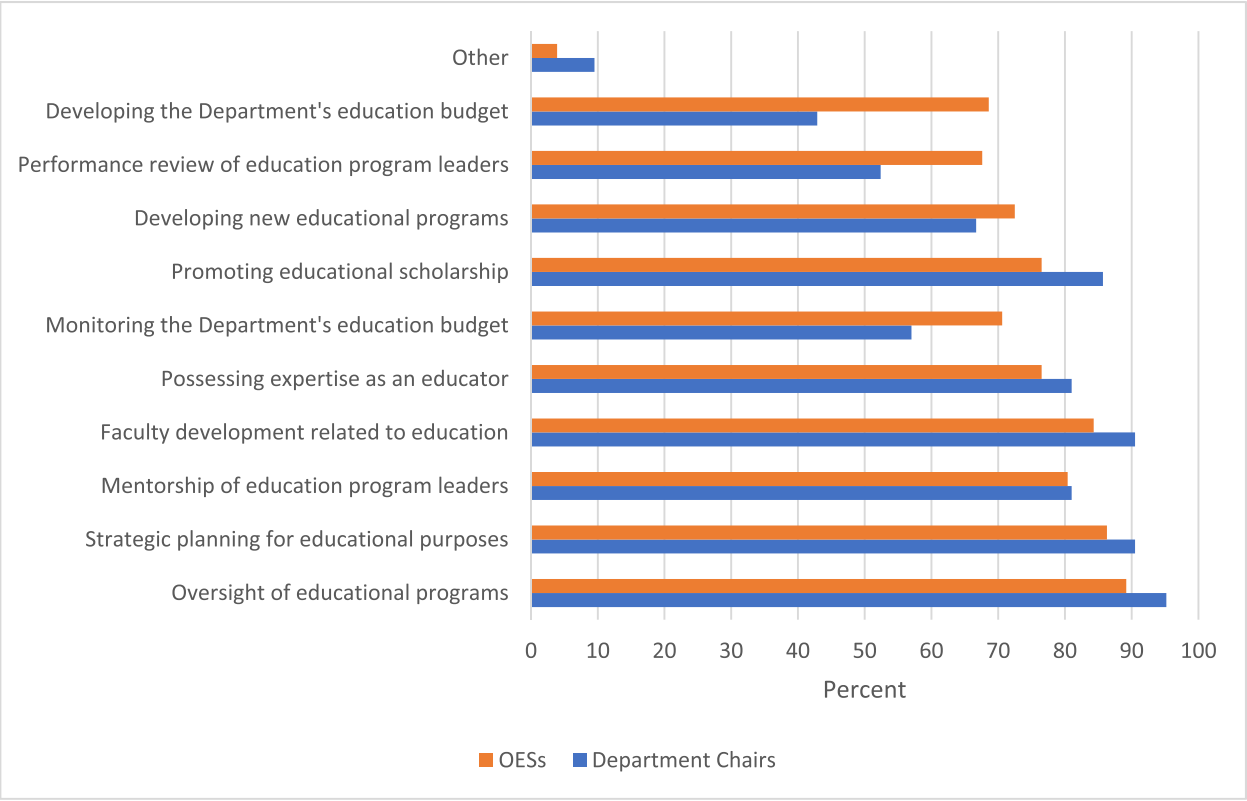


**Fig. 2.** Roles and responsibilities of the VCE as viewed by DCs and OESs.

to be program development and growth (9.1%), medical student and fellow issues (6.1%), education/Clinical Competency Committee meetings (6.1%), residency recruitment/termination (6.1%), research & training (6.1%), program management issues (6.1%), and shadowing requests/foreign medical graduate elective request (3.1%). Additionally, 33.3% of OESs responded that they have not contacted their VCE.

All respondents were asked how frequently they met with the VCE. DCs responded most often that they meet with the VCE once per month (17/21, 81.0%). OESs varied greatly in their responses with only 20.2% (20/99) meeting with the VCE monthly and 19.2% (19/99) of the respondents stating that they never meet with the VCE.

### *Value of VCEs in departments*

The DCs and OESs were asked on a Likert scale their level of agreement with several statements. The first statement was "the VCE is an important member of the Department education team". Overall DCs agreed with this statement with 75.0% (15/20) responding "strongly agree" and 20.0% (4/20) responding "agree". OESs were less likely to agree with this statement with only 68.7% (68/99) responding "agree" or "strongly agree". The difference between these two groups in their responses was noted to be significant with a p-value of 0.0464 (Fig. 3).

When asked to respond to the statement "The VCE enhances my ability to fulfill my educational role", the vast majority of DCs agreed with this statement with 71.4% (15/21) strongly agreeing and 23.8% (5/21) agreeing. When OESs were asked to respond to the same statement, there was significantly less agreement with only about half of respondents supporting this statement (20/99, 20.2% strongly agree; 29/99, 29.3% agree). The difference between these two groups in their responses was noted to be significant with a p-value of 0.0002 (Fig. 3).

DCs and OESs were also asked to respond to the statement "The VCE plays a critical role in achieving the education mission in my Department." Again, DCs overwhelmingly agreed with this statement with 61.9% (13/21) strongly agreeing and 28.6% (6/21) agreeing. Once again, OESs were more divided in their responses with 56.6% (56/99) agreeing with this statement and 22.2% (22/99) disagreeing with this statement. The difference between these two groups in their responses was noted to be significant with a p value of 0.0032 (Fig. 3).

"The VCE enhances the quality of education in my department" was also met with agreement from DCs with 66.7% (14/21) strongly agreeing and 28.6% (6/21) agreeing. OESs agreed with this statement, with 65.5% (65/99) agreeing and only 17.2% (17/99) disagreeing. The difference between these two groups in their responses was noted to be significant with a p value of 0.0174 (Fig. 3).

OESs were also asked about how the VCE affects their autonomy. 9.7% (10/103) felt that the VCE diminished their autonomy while 90.3% (93/103) felt that the VCE did not diminish their autonomy.

## Discussion

In this study, we describe the role and value of the VCE in Departments of Surgery from the perspective of two key groups of educational stakeholders. These groups are DCs, who have established or maintained the position and provide expectations to the VCE, as well as other faculty educators who interact with and could potentially benefit from the leadership provided by the VCE. Prior research on the VCE role has focused on the perspective of the VCEs themselves, including in Internal Medicine, Radiology, Psychiatry

and Surgery.[6–9] In addition, the perspectives of DCs and PDs were sought in Psychiatry.[7] Importantly, we expand the definition of "educational stakeholders" to include CDs, Fellowship Directors and ESs, all of whom are important members of the educational team and could benefit from a well-defined and supported VCE.

We found that the opinions of DCs and OESs about the role and value of the VCE are widely disparate, with DCs placing much more value on the role of the VCE than PDs, CDs and ESs. This discrepancy highlights an important opportunity to improve the effectiveness of the VCE role to support the needs of all educational stakeholders in achieving excellence in the education mission in Departments of Surgery. Ultimately it is the expectation that the VCE should satisfy the expectations of the DC as the DC is most likely the one providing support for the role. It is equally important that the VCE be viewed by OESs as a valued member of the education team within Departments of Surgery in order to be successful.

The demographics of the VCE, as reported by our study participants, are similar to what was reported nearly a decade ago. The majority of VCEs are MD's, as opposed to ESs without a medical degree, and the majority of VCEs are supported at 0.2 FTE, consistent with what was previously reported by Sanfey and colleagues in 2012.[5] In the current study, over half of DCs report that their VCE does have a job description, which is an improvement compared to the 24% of VCEs who reported having a job description 8 years ago.[5] Prior literature has focused on the importance of establishing this job description and it appears that progress has been made in defining the VCE role in Departments of Surgery.

Unfortunately, progress in establishing a job description for the

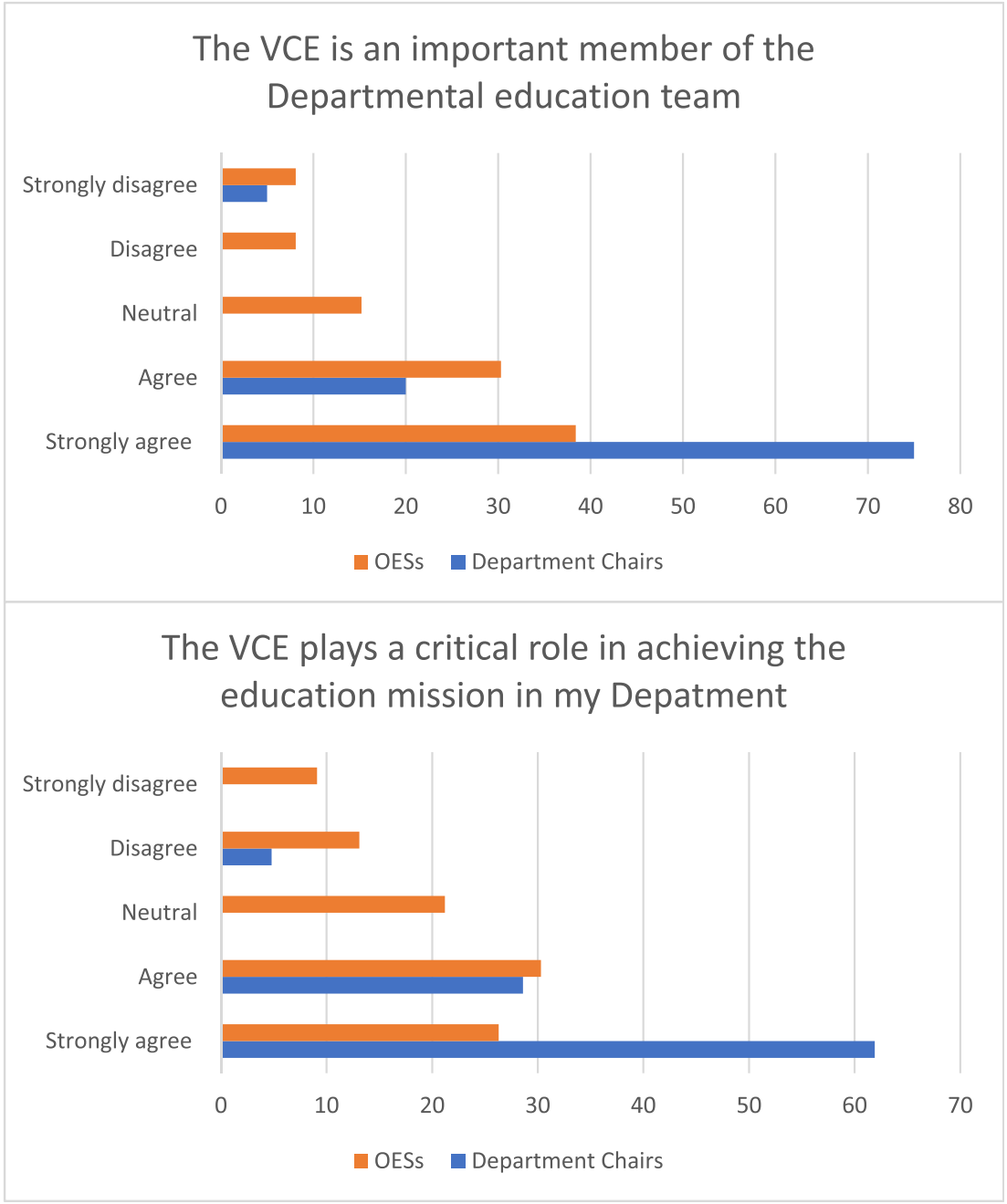


**Fig. 3.** How DCs and OESs view the role of the VCE in Departments of Surgery.

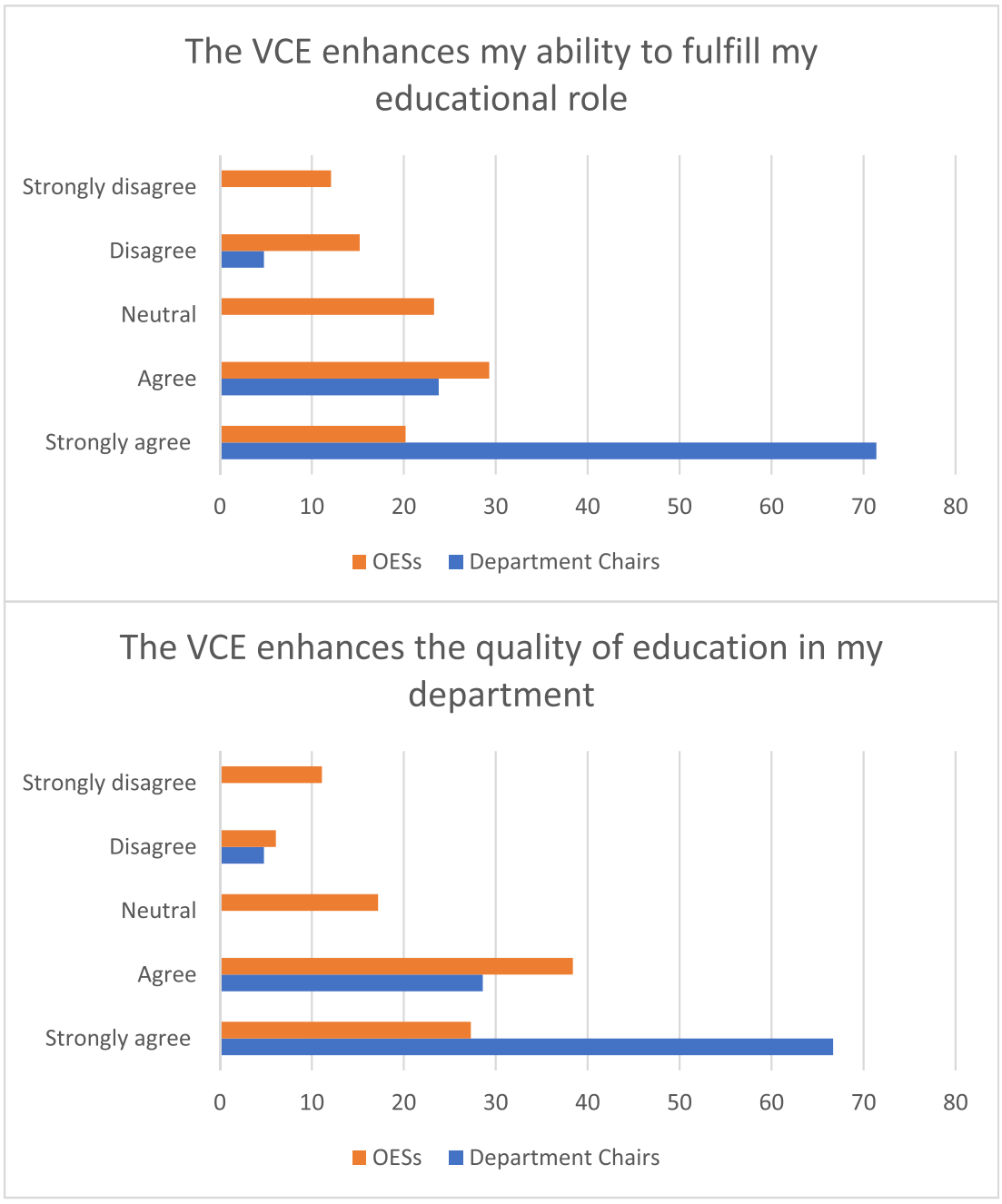


**Fig. 3.** (*continued*).

VCE was largely demonstrated in our data from DCs, with substantially fewer OESs being aware of the VCE job description. Uncertainty regarding the role of the VCE among OESs was a frequent finding across different topics that were addressed by our survey, including whether the VCE manages a budget. The fact that OESs are not aware of the resources that have (or have not) been granted to their VCE makes it difficult for them to know what support they might request or expect from the VCE. Similarly, confusion regarding the authority of the VCE to make decisions and act upon them could result in lack of alignment of expectations for the role amongst stakeholders. Indeed, our data suggests that effective communication between VCEs and OESs may be lacking, given the infrequency with which these individuals report interacting. We did not investigate the reporting structure between VCEs and OESs; a better understanding of reporting structures could shed light on issues with communication and shared understanding. Thus, while job descriptions are increasingly common, communication and transparency regarding the VCE role continues to lag.

The perceptions of DCs and OESs are significantly different regarding the value of the VCE. It is encouraging and important to note that there is nearly unanimous agreement amongst DC respondents that the VCE enhances their ability to fulfill their educational role, plays a critical role in achieving the education mission, enhances the quality of education in the Department, and is an important member of the education team. Unfortunately, OESs do not share these sentiments. This highlights a critical discrepancy

that should be addressed in order to optimize the role of the VCE in support of everyone on the educational team.

In an effort to consider how to address the perceived lack of value by OESs, we turn to the literature on highly effective teams. High-functioning teams demonstrate high levels of trust, communication, collaboration, and experience.[10–14] In addition, prior research suggests that ambiguity of roles and responsibilities is a major barrier to establishing effective education teams.[15] The lack of communication with OESs regarding the VCE job description creates this role ambiguity that may result in tensions on the educational team and an ineffective team dynamic. While VCEs should strive to understand the needs of OESs, their authority to address these needs is ultimately a reflection of the support and resources provided by the DC. The DC and VCE must therefore communicate the scope of the VCE role, authority of the VCE, and resources provided to and through the VCE in support of educational programs to all members of the education team. In addition, in this two-way-street of collaboration, VCEs may be in a position to inform and negotiate with DCs for the support that OESs request. The establishment of mutual understanding between all members of the team could facilitate setting expectations and perhaps increase the value of the role to OESs.

Finally, it is possible, if not likely, that different DCs will have different visions and goals for the education mission within their Department, so the VCE job descriptions will necessarily vary across Departments of Surgery. Some may aspire to lead in surgical education research, while others may aspire to lead in curricular innovations. While "Department A" may strive to be known for innovation in surgical simulation, "Department B" may focus on improving training in rural surgery. The charge of the VCE in these different Departments is likely to be different and reflective of local vision, values, politics and culture. Therefore, a one-size-fits-all VCE job description is unlikely to be valuable across Departments of Surgery and each DC must consider the nuances of the role to support their own vision and Department.

This study has several important limitations. First, non-response bias may have affected our results, particularly within the PD and CD populations in which the response rate was lower.[16] In particular, stakeholders with relatively neutral views of the VCE role may have been less likely to take the time to respond to the survey. Thus, the response rates for specific sub-populations in our study may limit the generalizability of our findings. In addition, while we were able to quantify the degree to which different stakeholders value the VCE role, narrative responses were insufficient in number and length to support formal qualitative analysis of *why* respondents felt the way they did. In the future, qualitative approaches to investigating this question would provide important additional insight regarding the reasons educational stakeholders feel as they do about the VCE role. The richer understanding that can be gleaned from qualitative methods will be important to inform further efforts to develop the VCE role to meet the needs of all educational stakeholders. Finally, we did not seek the opinions of DCs who do not have a VCE. This population may have important insight regarding reasons to *not* have a VCE that we did not capture with the study population we identified.

## Conclusions

The increasing number of DCs who have chosen to create or continue the VCE position and improvement in the proportion of those positions with a job description, suggest a continued and growing desire for the VCE role to support achievement of excellence in the education mission in Departments of Surgery. While strides have been made in defining the VCE role, it is imperative that these definitions are transparent and well-communicated to all members of the education team. In addition, better understanding the needs of faculty educators at all levels of engagement across Departments of Surgery could help to inform the expectations of the VCE and the resources and authority provided to the VCE. Further work is needed to align expectations of the VCE from the perspective of all members of the surgical education team, including Department Chairs and other faculty educators, to ensure the potential contributions of this role to achieving educational excellence are realized.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.amjsurg.2020.11.036.

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