

THE IMPACT OF COVID-19

on Heavy Equipment and
Diesel Technology Educators

OCTOBER 2020

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EXECUTIVE SUMMARY

In response to the pandemic, 61% of educators work at schools adopting a “hybrid” model, with a mix of in-person and online teaching. All but one survey participant in the remainder (37%) will be participating in 100% live teaching. Although more than a third are not teaching remotely at all, 84%-90% have made adjustments to how they teach (i.e., mandatory masks, social distancing, etc.).

Two-thirds express some degree of concern about the health-related aspects of returning to teaching. Virtually all see challenges in getting their jobs done effectively with the new restrictions. Depending on the specific concern, many have turned to school district officials for support and others have turned to industry stakeholders. It appears that those who felt the greatest concern about health helped convince their school district to use a hybrid model.

Keeping students engaged is the most widely perceived challenge (among 52%), followed by getting students enough opportunities for hands-on work (32%). The latter group is more likely to interact with industry stakeholders, presumably in search of support, as are the 21% who see safety as a significant challenge. When specifically asked how industry stakeholders can support them, 43% listed digital training materials. Nine in ten expect to make greater use of digital training materials no matter what their source.

INTRODUCTION

By now the devastating impact of the COVID-19 pandemic on the North American economy is familiar to all – or at least the short-term impact. The mindset has often been one characterized as treading water, awaiting either the return of business as usual or a “new normal,” depending on the individual outlook. But the pandemic is also threatening the long-term economic outlook in ways to which the casual observer may well be oblivious.

Economic growth depends on the strength of construction and manufacturing sectors, and this in turn depends on sustaining the pipeline of new, highly skilled tradespeople entering the workforce. Yet the pandemic has created all manner of challenges for those educating the next wave.

The mission of The AED Foundation is to enhance the success of the more than 800 member companies of Associated Equipment Distributors – construction equipment distributors, manufacturers, and industry service firms across North America. We do this by encouraging continuous learning, by providing educational opportunities for today’s employees, and by improving the availability and quality of equipment industry employees in the future. In order to support this mission, we wanted to develop a better understanding of the current, COVID-dominated situation and how its future direction can be steered toward the best possible outcome.

By offering insights into the post-COVID attitudes and decisions of educators working in the heavy equipment and diesel technology field, this report is intended to help our members understand the why behind those educators’ actions and enable them to become a more effective resource for those on the training side of the industry. In support of that objective, we conducted a survey of 77 such educators. The survey was conducted prior to the start of the current school year, with many questions asking them to anticipate facets of that school year.

Our analysis of the results is presented herein.

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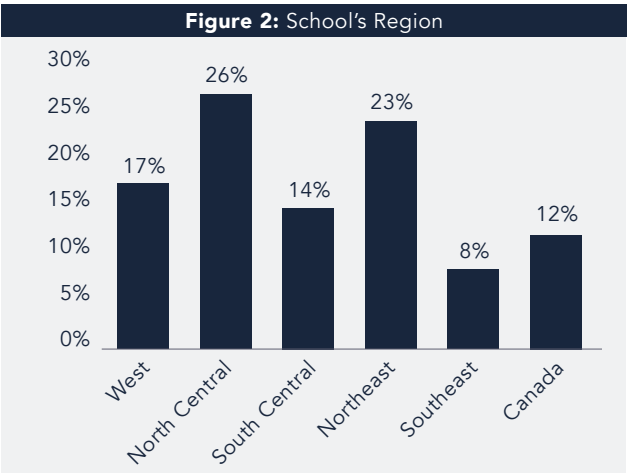
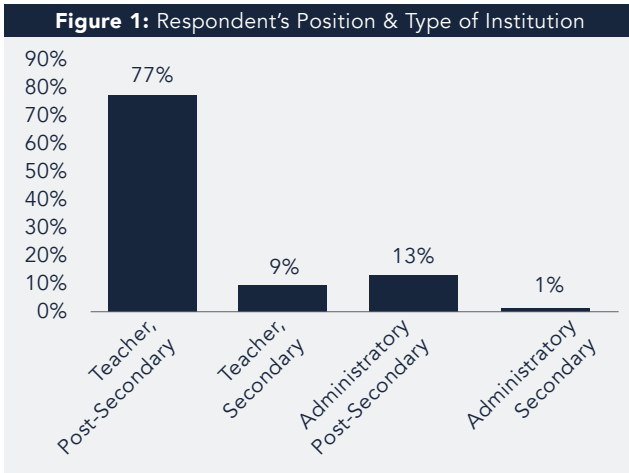
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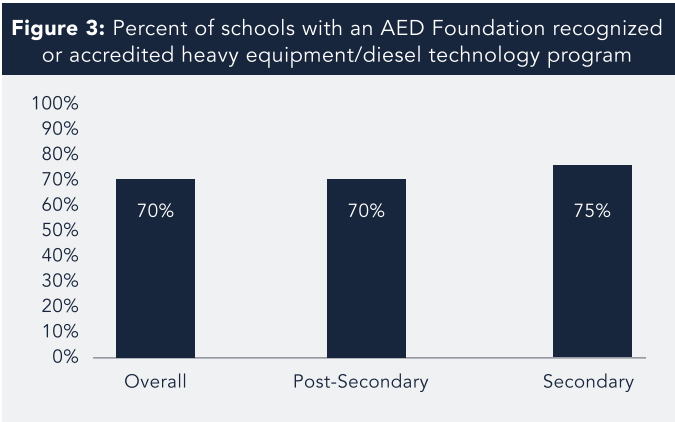
DETAILED FINDINGS

Context: The Sample

The perspectives in this report are largely drawn from those working in postsecondary education. The large majority of respondents (77%) were teachers in postsecondary schools, while a little more than half of the remainder (13% out of 23%) were administrators in postsecondary schools. However, the views of those in secondary schools have been mixed in, with one in ten respondents drawn from those schools – mostly teachers, with one administrator (see **Figure 1**). Our sample had good geographic representation, with schools dispersed across all regions of the U.S. and Canada (**Figure 2**).

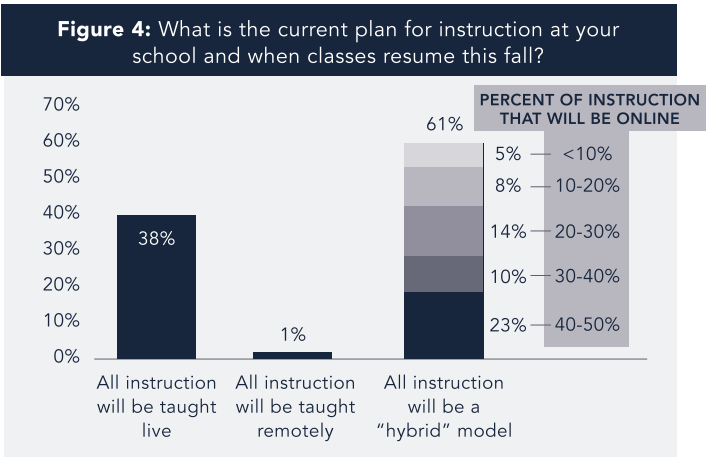


Seven out of ten schools represented in the sample have an AED Foundation recognized or accredited heavy equipment or diesel technology program (**Figure 3**). Note that this percentage didn't vary significantly by school type (i.e., secondary versus postsecondary).



THE BASIC ADJUSTMENTS PLANNED BY SCHOOLS

The planned mode of instruction for what was then the upcoming school year varied by institution (see **Figure 4**). Six in ten respondents work at schools planning a hybrid teaching model, blending in-person and online education. Roughly a third of these (23% out of 61% total) planned for 40% or more of instruction to be online. Four in ten overall were at schools planning to conduct all instruction live and in-person. Note that this means half of all schools (38% plus 8% plus 5%) were planning to conduct 80% or more of their instruction live.



Of those teaching in a live or hybrid environment (which is all but 1%), 90% are making adjustments to their approach to classroom instruction and 84% are doing so with their lab instruction. Whether discussing adjustments to classroom instruction or to lab work, at least four in ten said they will be requiring masks, imposing social distancing, or switching to online instruction for classroom work while keeping labs live. A third are reducing class sizes and/or splitting attendance among alternating cohorts on a given day (see **Figures 5 and 6**).

Figure 5: If you will be teaching in a live or hybrid environment this fall, are you making accommodations/modifications to your...

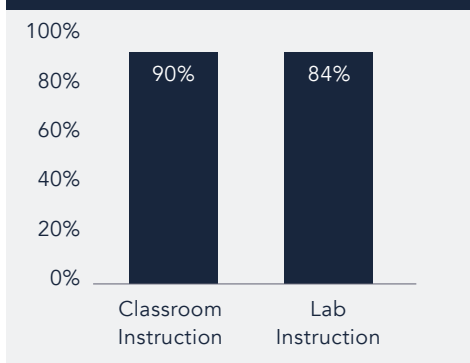
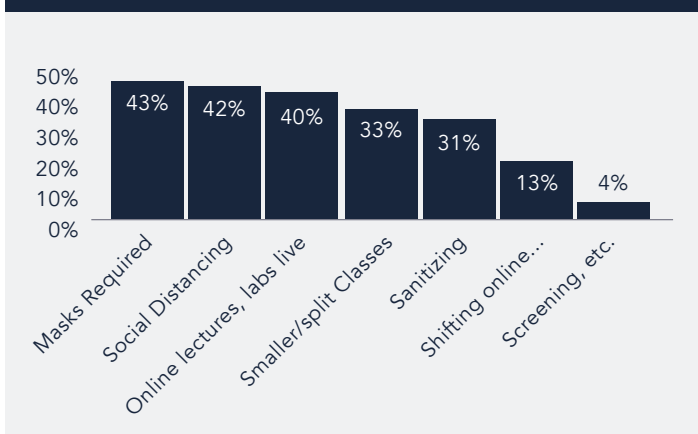


Figure 6: What modifications to your classroom/lab instruction are you making?



ATTITUDES LEAD TO ACTIONS

Two-thirds of respondents expressed a degree of concern over the health implications of returning to instruction in the fall. What may be surprising is that those teaching in a 100% live model were actually less likely to have health-related concerns than those teaching in hybrid models. One might expect that those interacting with students on a daily basis – and presumably more exposed to contagion from a potential virus carrier as a result – would be more likely to have health concerns, but this was not the case. Only half of these reported being somewhat or very concerned, while eight in ten of those teaching in a hybrid model – where less direct contact with students would be anticipated – expressed such concerns.

This suggests that attitudes about the health risks had been formed before a decision had been made about a 100%-live versus hybrid approach, and that those who were very concerned actually influenced the choice of model (see the schematic in **Figure 8**).

Figure 7: Level of concern about health implications, overall and by planned mode of instruction

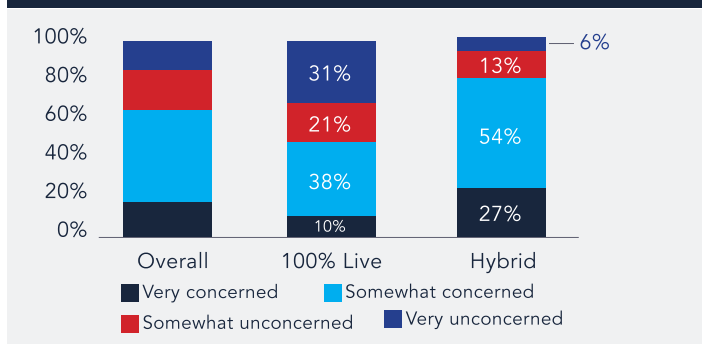


Figure 8: It appears that health concerns influenced the choice of model, rather than the choice of model influencing health concerns

The data does not support:

Work in 100% live model



Very concerned about health implications

Best interpretation:

Very concerned about health implications

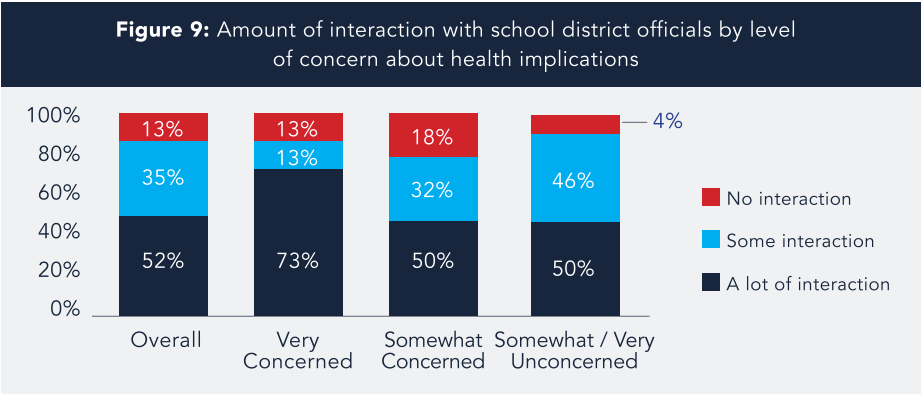


Interact more with school district officials



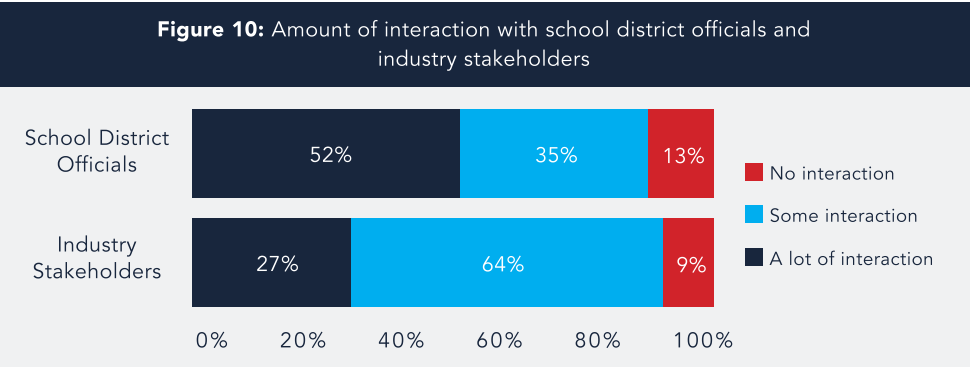
District agrees to hybrid model

Further support for this interpretation is found in how the extent of interaction with school district officials is related to the degree of concern. As **Figure 9** shows, almost three-fourths of those who said they were very concerned had a lot of interaction with officials, compared to half of those expressing a lesser degree of concern. That interaction may well have been motivated by instructors and administrators petitioning for a hybrid model, apparently successfully in many cases.



CHALLENGES AND SOURCES OF SUPPORT

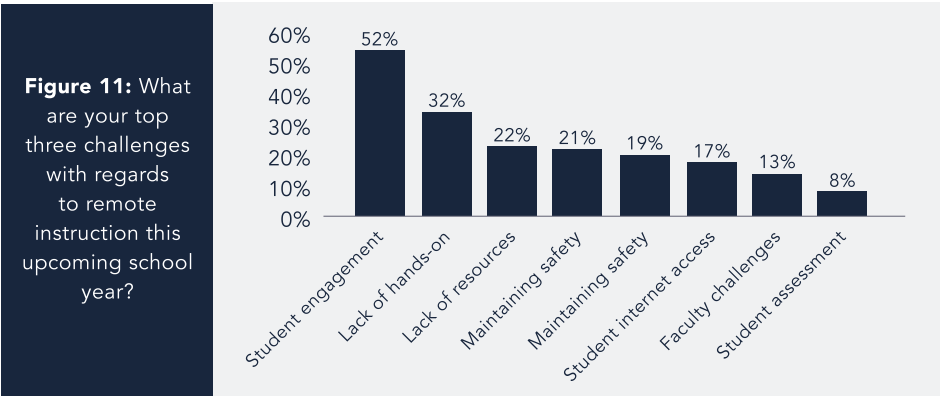
Educators were no less proactive when attempting to deal with the many challenges of teaching given social distancing, online glitches, or other adjustments made as a result of the pandemic. But if interaction with school district officials was driven by health concerns, what was on the agenda when survey participants interacted with industry stakeholders?

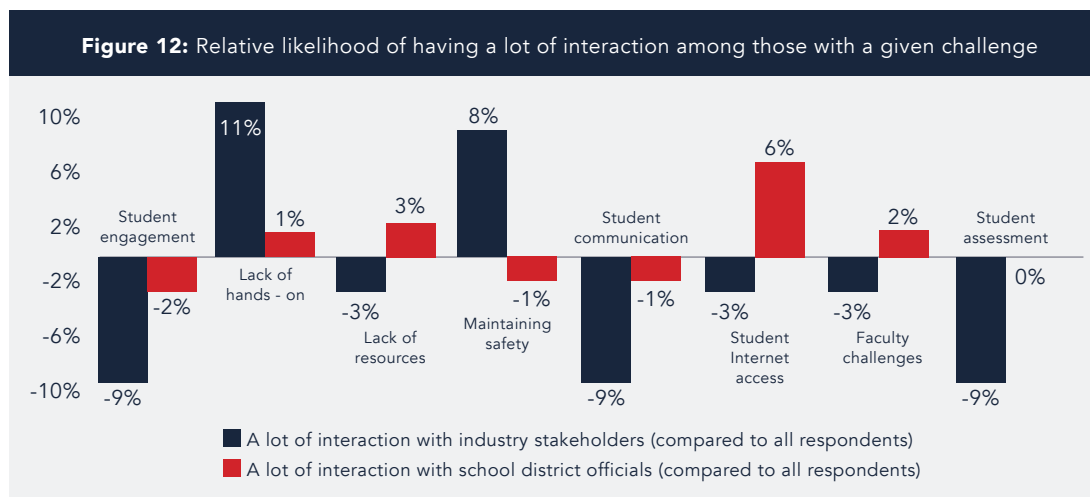


First, it should be pointed out that educators reported far less interaction with industry stakeholders than with school district officials. Where half said they had a lot of interaction with school district officials, , almost two-thirds characterized their communication with industry stakeholders as only “some interaction.”

But that level of interaction with stakeholders did vary based on how the challenges of teaching in the current environment were perceived. To dig into the reasons behind that, the first step is to summarize those perceived challenges, regardless of the school’s teaching model.

Keeping students engaged was by far the most frequently cited challenge, with over half of participants mentioning this. Coming in a somewhat distant second was the relative lack of opportunities for students to have hands-on work. Also mentioned by between 17% and 22% were a lack of resources, maintaining safety, communicating with students, and students’ ability to access the internet.





Just as the degree of interaction with school district officials varied based on concerns about health, interactions with both district officials and industry stakeholders varied based on the types of challenges envisioned by the educator.

Reviewing **Figure 12**, the patterns largely make intuitive sense. Some observations:

- Lack of student engagement, the biggest issue, may have no easy answer, as educators reporting challenges on this front were relatively less likely, compared to survey participants as a whole, to have a lot of interaction with either industry stakeholders or school district officials.
- Those seeing major challenges in terms of hands-on opportunities for students and/or maintaining safety were much more likely to have a lot of interaction with industry stakeholders. (Note that when specifically asked about the importance of the hands-on training component of their heavy equipment/diesel technology program, 100% rated it as very important.) Intuitively, these are the sorts of issues for which stakeholders might well be able to provide support.
- And, in fact, when asked specifically about the ways in which industry stakeholders could support them, 29% mentioned supplying or loaning equipment and another 19% mentioned various types of donations (including equipment), both of which would help to address the lack of hands-on opportunities (Figure 13).
- When it comes to lack of resources, greater interaction with school district officials was more likely (Figure 12).

However, on the question of specific ways industry stakeholders could support them, providing digital training materials was by far the No. 1 answer (Figure 13). And, in fact, 90% of the educators in our survey already planned to employ a variety of digital resources in their classes (Figure 14).

- Challenges surrounding student internet access are correlated with more interaction with school district officials (Figure 12).

Figure 13: What are the top three ways key stakeholders (dealers, manufacturers, etc.) can support your heavy equipment/diesel technology program during this time?

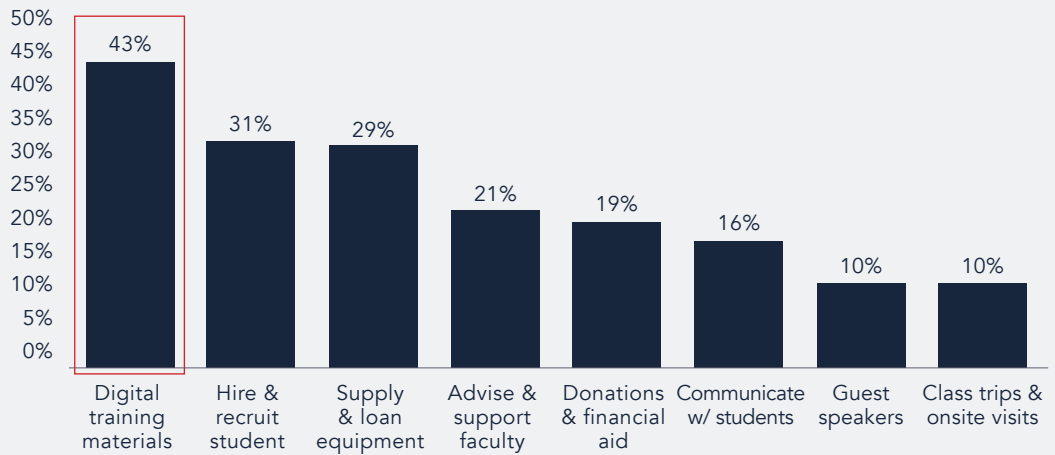
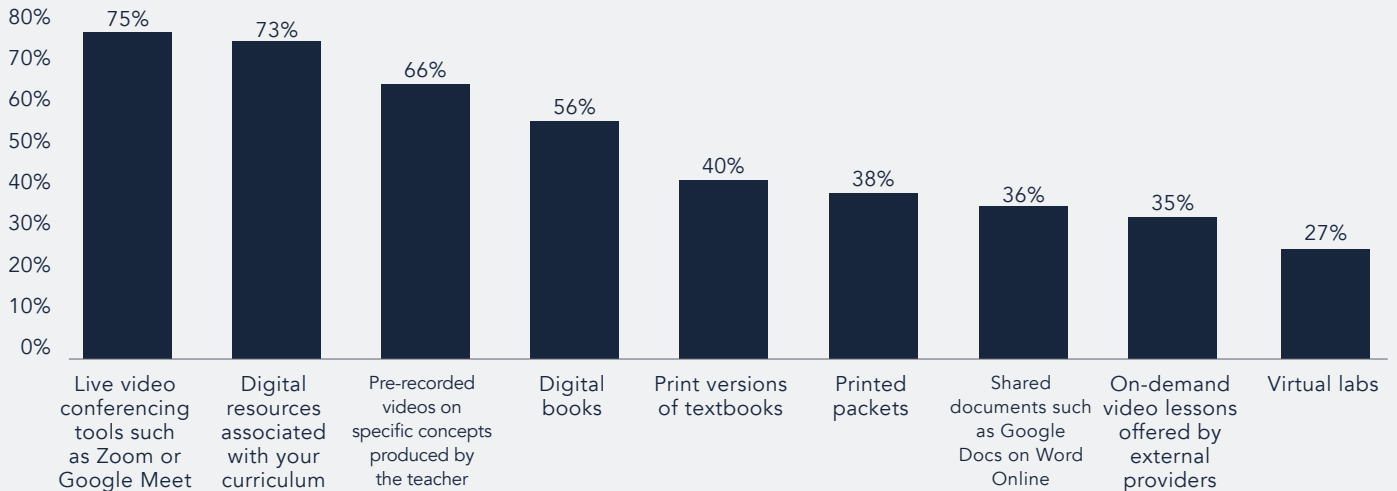


Figure 14: Regardless of the teaching environment, what tools and/or resources do you plan on utilizing this fall? (Select all that apply)



THE IMPACT ON STUDENTS

More than eight in ten participants reported that their program currently has more than 20 students enrolled. Yet almost half of all those interviewed said that enrollment was down from last year, compared to only three in ten reporting an increase. There was no difference in expectations for enrollment changes among those teaching in hybrid models and those teaching in 100% live models (Figure 13).

Almost nine in ten report dropout rates of less than 10%. Further good news can be found in expectations about placement rates, which are expected to remain the same by half of participants and to increase among another third. Figure 20 disproves any potential hypothesis that placement rates will increase only because schools will have fewer students to place; even among those educators who indicate that enrollment rates are down, more expect placement rates to increase (27%) than to decrease (19%). Optimism about placement rates is even higher among those reporting increases in enrollment, at 43%. This is an indication that positive numbers (in this case, enrollment rates) beget optimism about further positive results (i.e., placement rates).

RECOMMENDATIONS

Every dealership is different – with different goals and strategies, different customer bases, different business and legal climates, and so on. We therefore do not intend in any way to present “one-size-fits-all” recommendations in this section. It’s up to each member to determine which of these recommendations make sense, at least in one form or another, for their own dealership. We believe you’ll find the thinking to be sound; it’s then critical for you to work out the implications of a given idea for your own dealership.

The most important finding, we believe, is that educators are feeling a lot of stress in regard to dealing with the repercussions of the pandemic, but they’re taking a very proactive approach to meet that stress head-on. There is a sense of pragmatic optimism that emerges when one reads between the lines of these responses. Despite sometimes intense and always well-founded concerns about not only health but getting their jobs done, educators have a strong sense of what they can do and what sorts of support they need from their school district officials and from industry stakeholders in order to do it.

Among their most serious concerns are the loss of hands-on opportunities for students, and this is an area where they seek help from stakeholders – in the form of supplying or loaning equipment, or even making donations of same. Analyzing the costs and benefits of any sort of formalized equipment loan program is beyond the scope of this report, but developing such an analysis may be worth an individual firm’s time and effort.

But we would also point out that keeping students engaged is the single most widespread challenge faced by educators, and there’s no current evidence that they have a plan to address this specifically. It may pay member organizations to ask if there’s any way they can support educators in finding ways to spark and maintain students’ interest during these difficult times. In this context, it’s encouraging to note that the second and fourth most frequently cited calls for support are things those stakeholders have always done, and done well: recruit and hire program graduates, and advise and support faculty. As member organizations seek to broaden the ways in which they support educators, they should never take their focus off the things they already do well.

The bottom line may be this: optimistic educators appear to be in the best position and may be the most productive with whom to engage. But even their optimism is not beyond outside control. Two-thirds still have concerns about safety, and those who do are more likely to interact with industry stakeholders. Anything a member company can do to help an individual feel safer – in terms of supplies, in terms of advice, in terms of information and insight – will only increase his or her sense of optimism. This will likely make the relationship that much more productive.

CONCLUSIONS

These are recommendations about the day-to-day realities of the current pandemic and our response. If the current reality has taught us nothing else, it’s that we should always remain flexible and open to new ways of doing things, taking proactive steps to head off potential future crises. Whether we ever “get back to normal” or eventually settle in to a “new normal,” there is no question that further changes await us at some point. Planning for the unknown is an oxymoron. But staying adaptable is almost mandatory.