

# UCF DIGITAL LEARNING COURSE REDESIGN INITIATIVE (DL CRI)

Final Data Report



**Pegasus  
Innovation Lab**

UNIVERSITY OF CENTRAL FLORIDA

# OVERVIEW

This report contains a summary of the final result of data collected between Fall 2018 and Spring 2021, including additional insights from the CRI Committee. Data was collected by the Pegasus Innovation Lab (iLab) team and evaluated with assistance from Dr. Patsy Moskal, Director of the [Research Initiative for Teaching Effectiveness](#) (RITE), and the RITE Graduate Teaching Assistants (GTAs).

## COURSE REDESIGN GOALS

### Redesign 100 Courses

- Goal: 100 Courses Total
  - 140 of 100 complete
  - 12 did not submit SCR
- Goal: 50 Adaptive Learning
  - 46 of 50 complete
  - 26 are personalized (not PAL, i.e., ObojoboNext, MasteryPath)

We were able to exceed our original course redesign goal with a completion of 140 individual course redesign projects. Of all of projects, only an additional 12 were not completed not submitting the required Summative Course Review (SCR). This was due to cases such as insufficient time to finish by the deadline or medical reasons. However, those who did not officially complete their SCRs fully intended to complete the redesigns on their own and still teach their redesigned courses in the future.

Of these 140 completed redesign projects, 46 implemented adaptive learning within their courses. 20 of those projects were considered by the Center for Distributed Learning (CDL) as personalized adaptive learning (PAL) courses which used Realizeit, Acrobatiq, ALEKS, and Knewton. The other 26 projects used personalized tools but are not officially designated as PAL by CDL's definition. These included tools such as LearnSmart, Canvas MasteryPath, or CDL's in-home program ObojobNext.

## Enabling & Impact Goals

- Goal: 120 faculty trained
  - 103 completed training
- Goal: Engage with 5 colleges and departments
  - 11 colleges represented
- Goal: Impact 50,000 enrollments
  - 84,728 (60,281 are CBA REAL only)
- 8 Active Learning Classrooms in CBI in operation

Although technically we did not meet the goal of 120 faculty trained, this was partially since many of the faculty members who participated in DL CRI had already gone through faculty development training. Those who already had training to teach online and blended courses sometimes opted into additional development training, such as Active Learning, IDL7000, or PAL5000 if their redesign included adaptive learning.

Coincidentally, there were 120 unique faculty who participated in DL CRI, 15 of which completed 2 or 3 redesign projects of their own. Of these faculty, we were able to engage with 11 out of the 13 colleges at UCF.

Due to the large number of course redesign projects, we were fortunately able to meet our student enrollment goal with 84,728 students impacted. To be fully transparent, 60,281 of these enrollments were from the courses that were marked with the [REAL attribute](#) in the College of Business.

Additionally, students were impacted with the addition of 8 new active learning classrooms that were built in Classroom Building 1 that have been in operation since 2020.

# RITE EVALUATION REPORT

The following data was analyzed and approved to be shared by Dr. Patsy Moskal and the RITE team. In the Fall of 2021, a final data evaluation report was shared with the CRI stakeholders and UCF Board of Trustees.

Figure 1 is a quick summary of the target metrics of this data. Peoplesoft was the system used by UCF which contains the student information system data, including course details (e.g., department, modality, instructor, term) and student demographics and academic performance data. RITE partnered with the Institutional Knowledge Management (IKM) department on procuring university data. The evaluation controlled for **teacher**, meaning courses were compared with the same course taught by the same teacher in the most recent similar term. As the condensed summer term (6 or 12 week semester) may impact the course or students, comparisons were made across spring or fall (16 week semesters), when at all possible.

## Limitations

- As data was collected only through Spring 2021, more information and additional insights could be provided through further evaluation.
- Some courses did not have data for comparison as it was the first time the course would be taught (N=19).
- Some courses were not yet taught in the new redesigned modality so the data could not be collected yet for this final report (N=41).
- The data was compared using the average rates of the pre-CRI taught sections to the post-CRI taught sections.
- As faculty are continually modifying their instruction, it is possible that their course modifications extended beyond their CRI plan. It is also possible that external factors might have impacted either faculty or students during this period.

## Student Performance in CRI Courses

Student performance was examined by declassifying grades into **student success** (final grade of A, B, or C). As CRI was directly focused on increasing adaptive learning and blended and online courses, these metrics are included in reporting. Course [modalities](#) included blended/mixed-mode (M), reduced active seating (RA, later called RS), fully online (W), or face-to-face (P). Both M and RA courses involve a decrease in seat time for students, thereby providing them with more flexibility in scheduling. For example, a face-to-face 3 credit hour course maybe redesigned as mixed-mode (M) format so that students must come to campus 1 hour a week with the remaining 2 hours of instruction delivered asynchronously online.

Figure 2 lists the courses that had a gain in student success (increase in the percentage of students achieving an A, B, or C), whereas Figure 3 lists the courses that did not achieve gains. It is important to note that some courses had high success rates prior to participating in the CRI. As gains are more difficult given a high ceiling effect, it is more difficult for those already with high performance to increase. Figure 4 lists the graduate courses participating in the CRI. While the focus of this initiative was on undergraduate students, several faculty had reasons for migrating their graduate course to a more flexible online or blended modality to increase access for their students. Success rates were not examined for these as being graduate courses they began with high success rates and increasing student performance was not the primary goal for those courses.

In general, the majority of PAL designated courses demonstrated an increase in student success, with the majority of Realizeit courses showing gains. While the majority of redesigned courses utilized Realizeit, some faculty did use other platforms such as Learnsmart, Acrobatiq, or Knewton Alta.

## Student Reactions to CRI Courses

Student reactions to their redesigned courses were examined using the university mandated Student Perception of Instruction (SPI) surveys. Figure 5 demonstrates the courses where students' SPI ratings were equal or increased compared to previous semesters, and Figure 6 illustrates the courses where there were no gains in the SPI score. As with student performance, courses were compared to comparable past semesters with the same instructor teaching the course prior to redesign. Similar to grades, instructors with high SPI ratings would have more difficulty showing gains due to a ceiling effect.

## Faculty Reactions to CRI Courses

A survey was provided to CRI participating faculty to gather their feedback on various areas of the initiative, including the proposal process, the faculty development they received as a result of participation, and their perceptions overall of the support they obtained to complete their course redesign.

Figure 7 illustrates the faculty reacted positively to the initiative, rating the proposal process (88%), faculty development offerings (90%), and overall support they received (90%) very highly.

Because the project focused on faculty utilizing adaptive learning, active learning or OER, we asked how well faculty believed these tools addressed learning objectives in their redesigned course. Figure 8 illustrates faculty perceptions of how well those instructional tools addressed their learning objectives. All 3 tools were rated highly, with 80% of faculty rating adaptive learning as excellent or very well, 95% rating active learning as highly, and 92% rating OER positively. However, 20% felt adaptive learning did not address their course objectives well, 6 percent were negative regarding active learning and 9% were unhappy with OER.

Figure 9 provides comparison data on faculty perception of time spent on course creation and teaching on their redesigned section compared to their prior (non-CRI format) creation of the course. It is important to note that these perceptions are based on past memory, and faculty do not keep track of exact measurements of time in course development. However, perception may impact their future participation in course redesign initiatives, so examining this data can be informative for future faculty incentivized projects. Overall, the majority of faculty felt that they spent more time creating their course (43% a lot more, 35% a little more). However, the majority of faculty indicated the same or less time spent teaching their redesigned course (35% same, 10% a little less, 10% a lot less).

Additional faculty reactions to participating in the CRI process were also positive including:

- 100% found the course redesign initiative helpful (95% Very)
- 94% were positive regarding the proposal process
- 100% were positive regarding the faculty development provided
- 100% were positive regarding overall support
- 100% were satisfied with the new course they created (85% rating it as Excellent)
- 95% were positive about continuing to teach the course in the future with the CRI redesigns

## COVID-19 Impact

During the middle of the Spring 2020 semester, all UCF courses were shifted to remote instruction. As the pandemic continued, the university implemented a temporary modality (VI, called V 'prime') to track courses originally meant to be taught face-to-face or blended, but now shifted to COVID-induced remote instruction. This rapid migration put faculty into "survival mode" in order to offer courses to their students. As a result, some CRI redesigned courses were not able to be taught in the proposed format, either temporarily or at all, and this impacted our data collection during the Summer and Fall 2020 semesters. (Data on the course was not collected until the course was taught in the correct, proposed format.) Additionally, due to the emergency switch, this caused some faculty to be delayed in their redesign process as they had their attention on their active courses.

However, a positive and unanticipated side effect of the pandemic was that many faculty who had participated in the CRI process felt that the initiative had helped them be better prepared for the rapid migration to remote instruction as illustrated in Figure 10. Below are a few of the faculty responses we received regarding the support of the CRI initiative during this time:

"All the outcomes were positive! The good thing was that this redesigned course prepared me to teach online during this crazy COVID time. I do appreciate it." ~Anonymous

"The enhancement to my Webcourses content and organization made the move to remote learning easier for students." ~Anonymous

"Mostly, I appreciated the opportunity to fully reimagine a course I'd taught previously a number of semesters. It was great connecting with CDL, FCTL, and other faculty going through the CRI process, as that provided lots of inspiration for me. I also feel that designing the course for RA with an emphasis on active learning prepared me to teach the course synchronously in-person and via Zoom as I eventually did during the pandemic." ~Anonymous



“The Digital Learning Course Redesign Initiative was and still is a unique help to all the faculty who do not understand how to teach foreign language online. The iLab in CDL is a visionary to create this project because it was exactly in the right time before COVID-19. For all the faculty who worked in this project, it was very easy to switch immediately on online teaching because they have worked already based on it. The whole summer, I was in different webinars with American council for teacher of Foreign languages (particularly Russian sections) and no one had the same project in their schools as we have at UCF, and also no one had this experience as I do to work with the instructional designer one on one to develop a new course. The iLab in CDL has prepared us to work in this difficult and stressful situation during COVID time. They not only prepared us in context course development but prepared us mentally and morally. I would never have made it without them!” ~ Dr. Alla Kourova, Modern Languages and Literatures (CAH)

“I wanted to state how unfortunately this semester obviously did not end the way we had envisioned with the move to entirely online instruction, and it especially impacted my portion of the course, the majority of which fell after spring break. However, despite that change, the fact we did the digital redesign for Bio 2 ended up being a very lucky situation since I was much better trained and primed to be able to continue the course with minimal changes. I only had to adapt the in class lecture exams to online versions and record narrated lectures which I am posting in You Tube after recording in Zoom. The fact we already had a lot of online material (e.g. Expert TA online homework, curated readings in Pages, online Webcourses quizzes, etc.) made it much easier for the students since they had been doing that all semester anyway. Clearly if we had to go fully online for the whole semester, we would make even more adjustments but considering the large class size and the potential issues that could have happened going online suddenly, I am very happy about the way things turned out and appreciate having the tools and knowledge for the most part to have that happen as smoothly as possible!” ~Dr. Christa Diercksen, Biology (COS)

## Summary of Evaluation Lessons Learned

- Realizeit courses performed very well throughout the CRI initiative.
- Redesigning an adaptive course is a lot of work, but partnerships help make it easier. Additionally, good support is critical to the success of implementing an adaptive redesign.
- The lessons learned throughout this process helped the faculty to rapidly pivot to remote instruction, which in turn helped students with their courses, too.

# OVERALL LESSONS LEARNED

After the first set of Summative Course Reviews and cohort meetings, the CRI committee slowly began gathering feedback and lessons learned that were implemented during the initiative or saved for future iterations.

## One-Size-Fits-All Incentives

Faculty often voiced concern that there is not enough time to complete large scale projects, especially for a redesign initiative such as this one. As such, to start we offered course buyouts or “course releases.” This allowed a faculty member to request to their department to have an adjunct teach their course for a semester while they worked on their redesign project. However, we soon learned that this option did not work for everyone. Due to some faculty members’ specialization, there was not another faculty member or adjunct who could teach their course. This led to the offer of funds that could be used for travel/research or an equivalent, such as purchasing equipment or conference registration, so long as 1) it was not direct compensation and 2) was capped at \$5,000. While we would have loved to offer everyone \$5,000, the union under collective bargaining would not allow this.

## Faculty-Involved Recruiting

After the first round of faculty participants, we quickly learned that faculty are one of our greatest champions. Faculty were great in spreading the word about the redesign initiative and gathering additional colleagues who were interested in participating.

For example, two faculty members from the Modern Languages and Literatures department helped encourage fellow faculty members to also participate in the redesign process by teaching with their course content, which in turn led to a departmental discussion of redesigning some of their language programs.

One of our UCF Faculty Fellows, Ron DeMara, helped recruit engineering faculty who traditionally resisted digital learning. His experience and his understanding of their department helped provide a real, fresh perspective than us trying to convince others to participate on our own.

## Don't Underestimate the Time Commitment

Early on, we learned from faculty that they greatly overestimated what they could get done in a reasonable amount of time, especially for those who were redesigning adaptive courses. In their eagerness, they assumed completing faculty development training and updating the course content could easily be done in a matter of weeks. In turn, they found that a successful redesign needed at least a full semester to be done well.

For the adaptive courses, we learned to express to faculty that they should plan for a semester to complete the training, and then a second semester to work on redesigning the content.

Additionally, the Call for Proposals submission was adjusted to include a step that requires the faculty member to consult with an Instructional Designer about their plans and to set a realistic timeline based on their objectives and needs.

## Program-Level Opportunities

While the initiative focused on individual faculty members redesigning their courses, to help accomplish our goals it became apparent that targeting program-level opportunities was a great way to get multiple faculty involved. They could partner together while also impacting a large number of students. This was especially with adaptive projects. Redesigned courses with adaptive components could be set up so that the same adaptive content was shared across multiple courses (such as a module on basic concepts) or the adaptive content could connect across courses (such as content that is based on introductory, intermediate, or expert levels).

A small group of faculty members from the Rosen College of Hospitality and Management campus worked together to create adaptive modules as they realized that throughout their program there were gaps in students' knowledge or experiences depending on how they progressed through the program.

In general, courses in sequence or within the same program can maximize collective impact by aligning with the new courses and sharing or repurposing instructional content.

## Course Reviews can be Tricky

To aid in the gathering of information from the faculty members on the Summative Course Review (SCR) form, the document was visually adjusted to make the format clearer. Additional questions were added to allow the faculty member to better express what items may still need to be completed or areas they would like to improve in the future, along with any additional comments.

This helped assure faculty members that they could share if something was out of their control, such as waiting for videos to be captioned by the CDL Video team or if their department was planning on scheduling the course in a later semester because they ran into a scheduling issue.

By clarifying the questions in the SCR form, this helped the faculty to better demonstrate the evidence of their redesign project and making it easier for the CRI Committee to review.

In regard to the CRI Committee, we learned that during the review process it was hard to balance quality standards without being evaluative. While there may have been areas that could have been improved (such as better conveying to students which aspects of a blended course would be in person vs online), those areas were not specifically called out in the SCR form. From a reviewing standpoint the CRI Committee did not want to hold that against them to prevent it from being approved. When these items popped up, the CRI Committee heavily relied on the ability to provide suggested feedback in the approval message to the faculty member.

Additionally, because the Instructional Designer testimonial was optional, there were cases where this area was left blank. This could be a struggle for the CRI Committee as they did not have the background context of the faculty member's work except for what was laid out in the document. In cases like these, the committee would sometimes reach out to the Instructional Designer, or even the faculty member, to gather more information before deciding, which could delay the approval process.

## Course Assistants

As we learned the time commitment needed for adaptive projects, starting in 2019 we were able to approve funding and a process to allow faculty members working on Realizeit adaptive redesign projects to request funding (\$1,500) for a “Course Assistant.” These Course Assistants were separate from regular Graduate Teaching Assistants (GTAs) and more like OPS positions.

The faculty and their department had full autonomy of the hiring process, who they would like to hire, and the pay rate/hours of the position. The Center for Distributed Learning only provided the funds.

The intention of the Course Assistant was to help the faculty member with their project only (not in their active teaching courses), including but not limited to building content and assessment questions in Realizeit, creating new questions, reviewing existing content (quality control), and content mapping. Once we learned that the inclusion of Course Assistants was extremely helpful and valued by the faculty, this was immediately implemented into the future CRI Extension process.

## Continual Improvement

As expressed above, throughout the initiative we constantly made an effort to improve our processes when possible through the feedback we received from our faculty participants, the Instructional Designers, and our other stakeholders.

# Target Metrics

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Target Outcome	Collection method
Scale	CRI Dashboard – Peoplesoft, FCTL for active learning
Student Success Rate	Peoplesoft – IKM
Student Withdrawal Rate	Peoplesoft – IKM
Student Attitudes	Student Perception of Instruction (SPI)
Faculty Attitudes	CRI Faculty Survey

FIGURE 1.



# Undergraduate Classes with Gains in Student Success by Modality and PAL Designation

	M	RA	W	P	
PAL	BSC2010C (R)	GEB4104 (R)	ENC4215 (R)	SPN1120C (R)	CHM2211 (R)
	CHS3530C (R)	PSB3002 (R)	HSC3593 (R)	SPN1121C (R)	ENT4412 (R)
	EGN3343 (R)	SPN1150C (R)	MAC1105 (R)	SPN1121C (R)	PHY2053(R)
	ENC3502 (R)	SOP3004 (LS)	PHI3626 (R)	SPN3000 (R)	
	MGF1107 (R)		SOP3742 (A)	ANT2511(R)	
			SPN1120C (R)		
Not PAL	ANT2000	PCB3044	ENC3314	AMH2010	POS2041
	BSC2010	PCB3522	HUM2020	AMH2020	REL2000
	CES4100C	PHY2048		ASH3200	SPC1608
	EGN3310			EGN3613	
	EML3303C			FIL4434C	
	MAC2311			HFT3523	
			PHY1038		

PAL platforms: Realizeit (R); Learnsmart (LS); Acrobatiq (A); Knewton Alta (KA)

FIGURE 2.



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# Undergraduate Classes Without Gains in Student Success by Modality and PAL Designation

	M	RA	W	P
PAL	<i>SPC1608H (R)</i> MCB4414 (A)	SPN2200 (R)	HFT2254(R) HFT4522(R) FRE1120C (R)	BOT3015(LS) MAC2311C(KA) OSE3200 (R)
Not PAL	CGS2010C CGS2100C EML3262 RUS1120 <i>RUS1121</i> <i>RUS2201</i> STA3032	ENC1101 <i>HSC2524</i> WOH2021	POS2041	

Classes in *italics* have success rates of 90% or higher.

PAL platforms: Realizeit (R); Learnsmart (LS); Acrobatiq (A); Knewton Alta (KA)

FIGURE 3.



# Graduate Classes by Modality and PAL Designation

	M	RA	W	P
PAL	EDF7403 (R) HMG6251 (R)		EME6613 (R) HMG6585 (R) SPA6417 (R)	
Not PAL	HSA6112 PET6389 MAN6395		PET5355 HMG6449 EME6457	

PAL platforms: Realizeit (R); Learnsmart (LS); Acrobatiq (A); Knewton Alta (KA)

FIGURE 4.



# Undergraduate Classes with Gains or Equal SPI Means by Modality and PAL Designation

	M	RA	W	P	
PAL	BSC2010C (R)	GEB4104 (R)	ANT2511 (R)	SOP3742 (A)	BOT3015 (LS)
	CHS3530C (R)	PSB3002 (R)	ENC4215 (R)	SPN1120C (R)	CHM2211 (R)
	EGN3343 (R)	SOP3004 (LS)	HSC3593 (R)	SPN1121C (R)	ENT4412 (R)
	ENC3502 (R)	SPN1150C (R)	MAC1105 (R)	SPN3000 (R)	PHY2053 (R)
	MGF1107 (R)		PHI3626 (R)		
Not PAL	ANT2000	MAC2311	ENC3314	AMH2020	MUL2010
	BSC2010	PCB3044	HSC2542	ASH3200	PHY1038
	CES4100C	PCB3522	HUM2020	EGN3613	POS2041
	CGS2100C	PHY2048		FIL4434C	REL2000
	EGN3310	RUS1121		HFT3523	SPC1608
	EML3303C				

PAL platforms: Realizeit (R); Learnsmart (LS); Acrobatiq (A); Knewton Alta (KA)

FIGURE 5.



# Undergraduate Classes Without Gains SPI Means by Modality and PAL Designation

	M	RA	W	P
PAL	SPC1608H (R) CHS3530C (R)	SPN2200 (R)	HFT2254(R) HFT4522(R) FRE1120C (R) SPN3300 (R)	BOT3015(LS) ENT4412 (R) MAC2311C (KA) OSE3200 (R)
Not PAL	EML3262 RUS2201 STA3032 PCB3044	ENC1101 HSC2524 WOH2012	AMH2010 POS2041	

PAL platforms: Realizeit (R); Learnsmart (LS); Acrobatiq (A); Knewton Alta (KA)

FIGURE 6.



# Faculty Ratings of CRI Processes

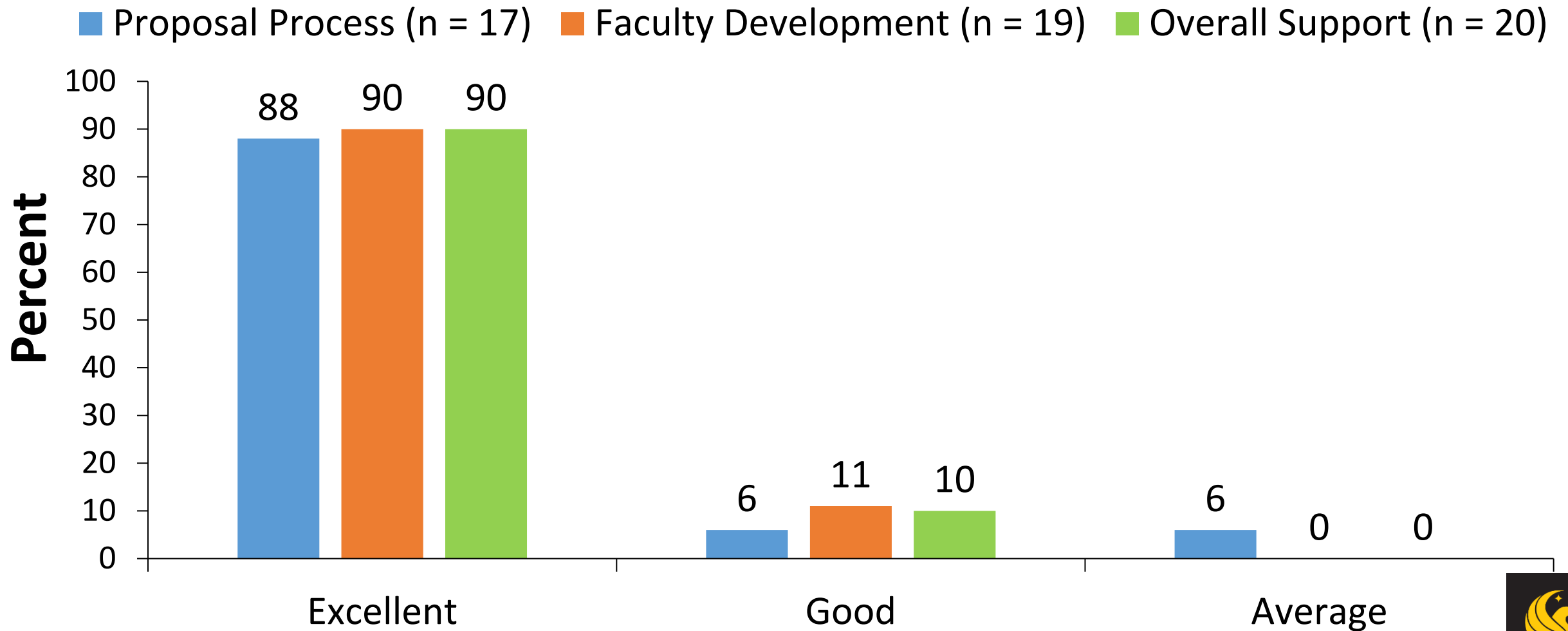


FIGURE 7.



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# How Well Instructional Tools Addressed Learning Objectives

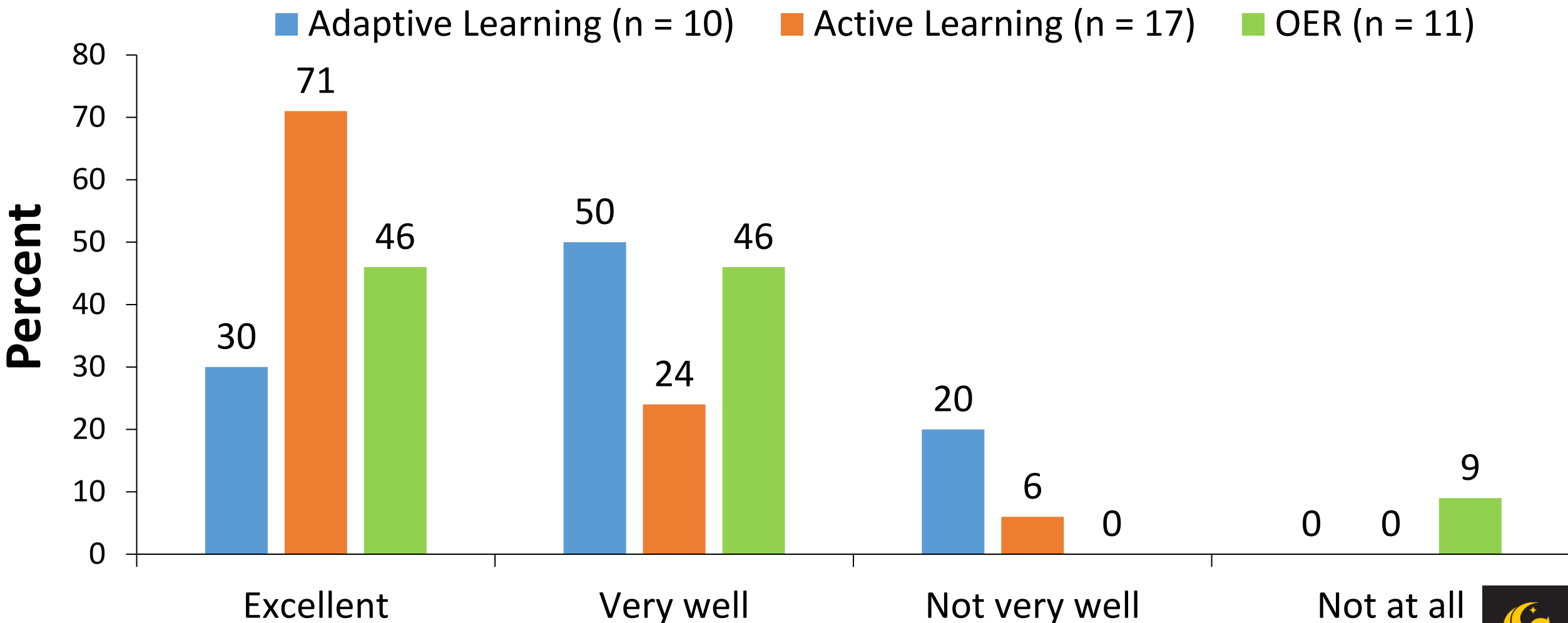


FIGURE 8.



# Amount of Time Spent Compared to the Past Sections

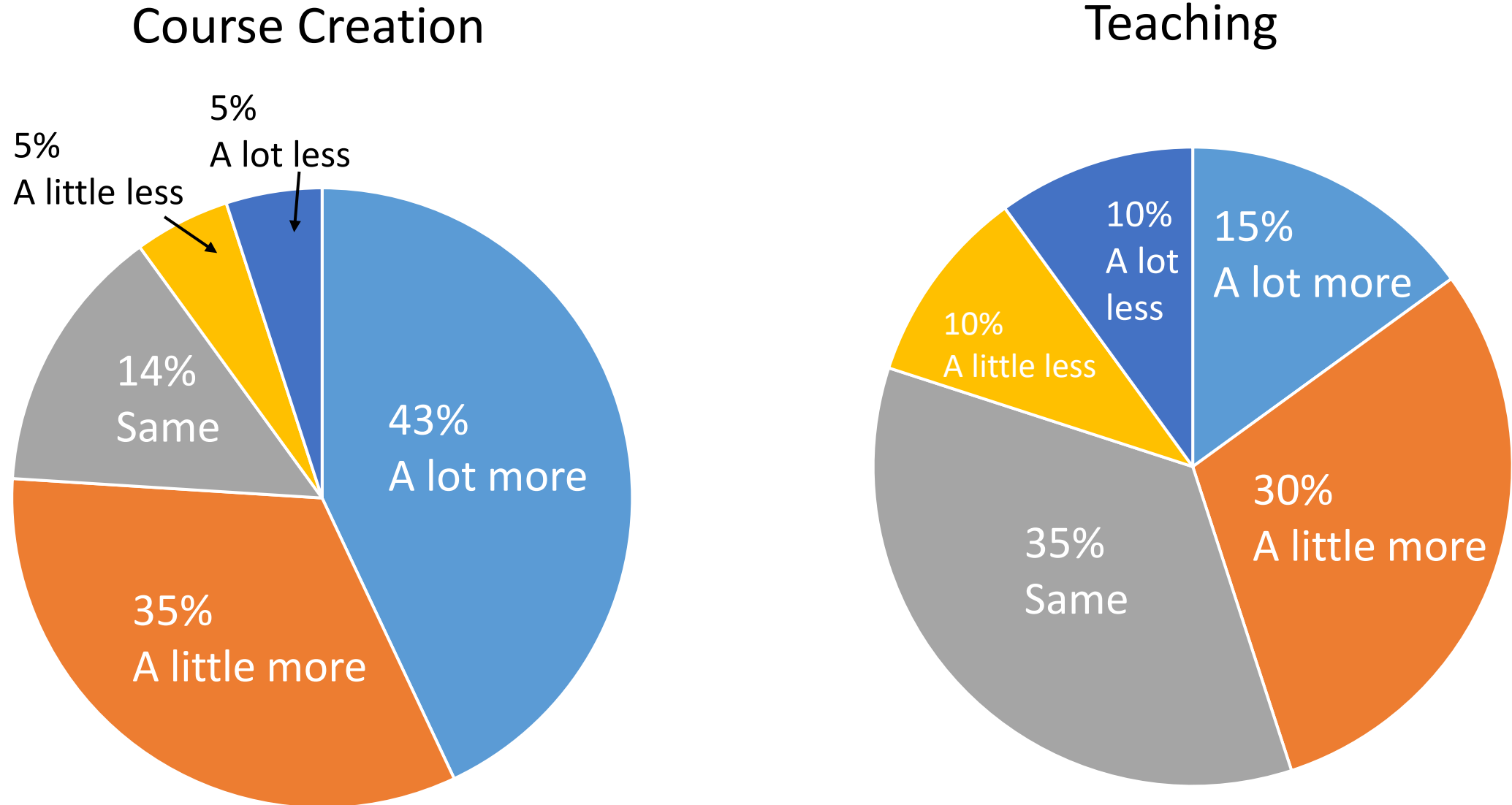
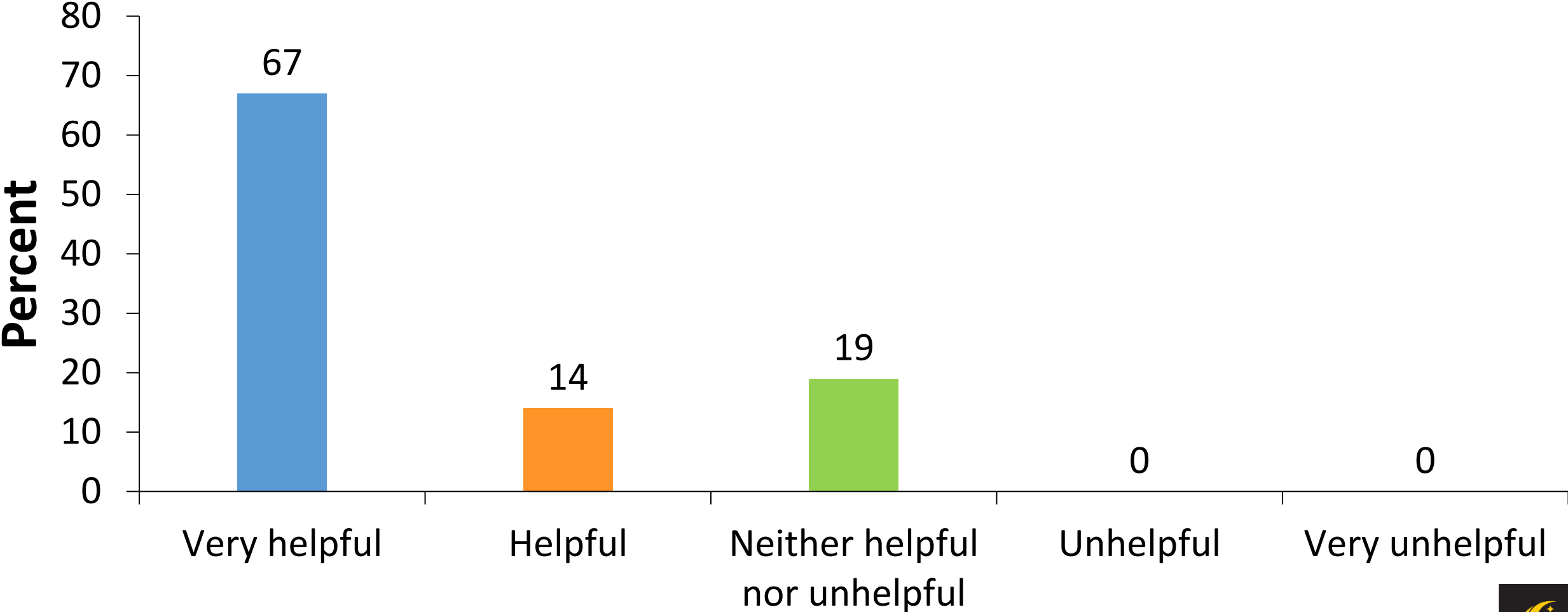


FIGURE 9.



# Helpfulness of Course Redesign for Teaching Remotely (n = 21)



\*81% said process helped them navigate to emerging remote teaching

FIGURE 10.

