Pep Rally Using One-on-One Faculty Consultations to Promote Technological Pedagogical Content Knowledge

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Abstract
This paper provides explanation of the use of the Technological Pedagogical Content Knowledge framework (TPACK) and its role in the one-on-one faculty on the subject of instructional design (ID). Additionally, it explains the application of this theoretical framework to the faculty who are at the beginning stages of their consultations with instructional designers. Thus, such faculty has different expectations, and it is important to gauge their current pedagogical practices to successfully assist them. The peri-pandemic ID team applied such an approach through their experiences with faculty in the Business School. As a result, one-on-one consultations became a key solution for the relationship and course development with the faculty.

Introduction
The field of instructional design (ID) is a relatively new domain. However, the COVID pandemic emphasized the need for ID experts in higher educational institutions as the demand increased significantly due to a prompt transition to online learning in Spring 2020. The urge for creation of such departments have been greatly noticeable across various institutions. O'Keefe et al. (2020) stated that faculty did not have enough time to gradually transition their face-to-face classes to online modalities and in this case, the role and help of IDs was reiterated again.

Therefore, a new term Emergency Remote Teaching has been framed to properly refer to such a rapid transition (Hodges et al., 2020). The knowledge that instructional designers bring into the institutions is not limited by technological aspect of it. They are experts in the curriculum development, course design, and creation of training programs. However, there is still a lack of understanding of differentiation between instructional technologists and instructional designers due to the fact that instructional designers possess both a toolkit and pedagogical knowledge that can bridge the gap in the pedagogical practices of the instructors with the incorporation of instructional technology in their courses. Therefore, it is important to be in a close collaboration with the subject matter expert (SME), but to never cross the line of defining the subject content of the course (Halupa, 2019). Thus, ID Teams play a crucial role in course design, but such teams should always have a strategy that they follow in order to successfully implement their services at the institutional level.

Needless to say, that the duties of new instructional design teams are not well defined as such new departments are yet on the way of determining their role and significance at the institutions. Faculty may not always know what to expect from such collaboration and what resources instructional designers have to offer. Therefore, there is a struggle of establishing an effective collaborative approach with faculty that would benefit the faculty and students' teaching and learning experiences in the long run both pedagogically and technologically.

One-on-One Faculty Consultations

This paper focuses the development process and workflow of a peri-pandemic instructional design team in the business school setting and establishment of its collaboration with faculty. It provides insights to the important steps of ID team building and the approaches to one-on-one online faculty consultations since the launch of the new ID team was provoked by the pandemic. Thus, immediate steps were taken to engage faculty and facilitate their distance learning practices by initiating direct contact with the SMEs. Throughout the process of team development, instructional designers recognized that faculty members are at different levels of technology integration in their teaching which has an impact on their overall adoption of classroom technology and its use for online and hy-flex learning experiences. Soto & Smith (2020) define hy-flex as a model of instruction that allows both teaching in-person and online simultaneously. As a result, one-on-one consultations were offered by instructional designers in order to meet individual pedagogical needs of faculty members regardless of the mode of instruction or level of technology adaptation. It was important to ensure that all the faculty members are able to teach in the preferred modality. Thus, the team was able to promote instructional technology integration to complement the pedagogical practices and content knowledge of faculty members depending on their needs and teaching expectations.

Additionally, one-on-one consultations allowed instructional designers to build trustworthy relationships with faculty from scratch. Such close contact has been noted to be beneficial since IDs were able to cater to the individual needs of SMEs which vary across the disciplines. The team had to overcome the challenges associated with only online communication, considering the fact that IDs have not met faculty in person due to pandemic circumstances. However, the process was more complex since the team existed fully online and faculty members were not acquainted with the advantages of such collaboration. The team lead emphasized the need of notetaking regarding the faculty interactions which further led to the classification of the faculty based on their requests and level of technology use. In such a way, certain patterns and outcomes of one-on-one consultations were identified which provided a clearer direction for the IDs on how they can develop their relationships with faculty and take it beyond technology consultations which was still very beneficial for the faculty who were mostly holding synchronous online classes at the moment. All this work has been done considering the future work of the team. Faculty classification based on their technology adaptation level in online learning informed IDs regarding the trainings that meet the existing needs of faculty both in pedagogical and technological domains.
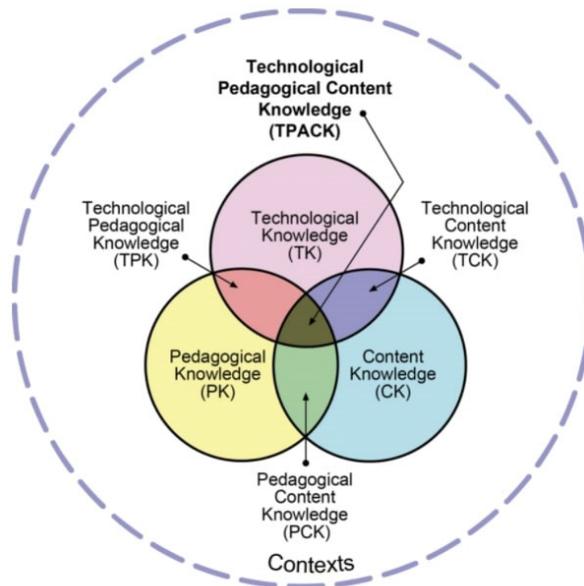
TPACK Framework

The active approach of the analysis that the team has taken led to understanding that it falls under the Technological Pedagogical Content Knowledge (TPACK) framework (Koehler & Mishra, 2013) since IDs consider the technological readiness of SMEs and makes suggestions for the course design and activities. It is important to take it one step at a time and not overwhelm the faculty with the content throughout the consultations, especially when all the instruction took place online. Therefore, TPACK provides more clarity on the elements that IDs consider while conducting the consultation: technology readiness, pedagogical component, and subject content.

TPACK framework explains the interconnection of three knowledge forms: Technological knowledge (TK), Pedagogical Knowledge (PK), and Content Knowledge (CK). This theory looks into the overlaps that such primary knowledge can create, and these overlaps are viewed as the most valuable practices in instruction: Pedagogical Content Knowledge (PCK), Technological Content Knowledge (TCK), Technological Pedagogical Knowledge (TPK)

(Koehler & Mishra, 2013). It is important to understand at which level of TK every faculty member is and how an instructional designer can assist to incorporate the knowledge to potentially bring the course to the level at which all of the three primary pieces of knowledge overlap and create an ideal environment to improve teaching experiences for instructors and learning for students.

Figure 1
Visualization of TPACK

Note. Figure 1 shows the representation of TPACK framework by mkoehler. Reproduced by permission of the publisher, © 2012 by tpack.org (Mkoehler, 2011).

Thus, TPACK is often applied in professional developments for teacher education. Such complex relation between three types of knowledge emphasizes the importance of the relations that lay in between. In such a way, instructors are able to promptly adapt to the needs of the course and students' alterations. Mishra & Koehler (2012) explain that this model is an extension of Shulman's idea of Pedagogical Content Knowledge (1987). Thus, the current state of education requires instructors to leverage various knowledge types to promote the best practices of student learning even during the worldwide pandemic.

Three Consultation Approaches
Based on the TPACK framework, Koh (2020) identified three approaches that instructional designers implement during their one-on-one faculty consultations with faculty members: technology modeling for faculty without significant TK, pedagogical realignment for faculty with some TK knowledge, and deepening practice for faculty with vast TK. Likewise, the described instructional designer team has created a database of faculty that they worked with and was able to identify certain patterns in the nature of one-on-one consultations that adhere to Koh's approaches of implementation (2020). Based on the initial requests and consultations, IDs are able to identify which strength the SME possesses and build upon that skill in order not to overwhelm the faculty member with a lot of new information.

Technology modeling approach is used with instructors who use a very minimal amount of technology in their classes (Koh, 2020). One of the primary reasons for such behavior is the lack of experience and in this case, one-on-one sessions are a great opportunity to give a short demo for the potential application of the tool in the course design. Moreover, Koh identified that when the instructional design team carried several faculty workshops, it increased an interest in the work of instructional designers and improved collaborative practices. Likewise, a positive dynamic has been experienced by the team when the decision was made to take a gradual instructional design immersion with faculty who choose to stick to more basic online course design with the limited toolkit usage. It is important for the course designer to be able to preview the course before the one-on-one consultation in order to know which primary knowledge in the TPACK framework may be prevalent and which overlaps already exist. In our case, IDs noted that one-on-one demos of the use of the certain technology may not always be enough. Oftentimes, ID create recorded instructional videos addressing a specific faculty question or detailed instructions that are provided to the instructor, so they are able to take more control over the reoccurring issue. For instance, instructors could make a request to demonstrate how to use the university LMS for assessment purposes. Additionally, some basic technological requests included identifying location of recorded class sessions.

Pedagogical realignment improves the PCK area of TPACK framework (Koh, 2020). According to the author, such an approach is taken towards the faculty who are willing to try out new approaches and technology. In such consultations, the role of an instructional designer is to ensure that the learning takes a student-centered standpoint. Also, the learning is engaging in the classroom environment using interactive tools for formative assessments and incorporation of group work. If students are expected to submit a multimedia assignment, instructor is advised to provide clear guidelines. In this case, ID Team assisted more significantly with pedagogical content, once the technological needs were fulfilled, specifically for online courses. It was more important for the instructor to be able to navigate technology for the classroom purposes and be confident in using it. After that need was met, IDs suggested to assist in creating more various content for online classes, such as self-paced instructional videos that incorporated interactions. Additionally, IDs would provide more ideas on how faculty can vary online class activities in order to increase student engagement throughout the sessions.

Deepening practice is applied to the faculty with more advanced experiences in all the knowledge areas. Such faculty were offered additional options to incorporate more robust instructional designs in their teaching with technological integration. Such cooperation enabled some of the faculty to have hybrid-flex classes which allows to mix different teaching modalities and audiences (Beatty, 2019). During Spring 2020, the instructional design Team Lead in collaboration with the Information Technology Department created a physical space that can be used both for students who are taking a class face-to-face and virtually. Additionally, it is worth mentioning that Business School has students who are located on campuses overseas. Hybrid-flex modality allowed to combine students who are able to learn in person and who can only come to class through the virtual conferencing platform. One-on-one consultations help to create deep reflective sessions on the current teaching practices that help instructors to come to a potential solution through the series of questions. Additionally, instructors who incorporate deepening practices in their courses are invited to share their experiences with the peers throughout the workshop series. It is an opportunity to share and reflect on the ongoing practices. Currently, deepening practices allow IDs to revamp the courses for specific faculty. It is worth

mentioning that adjunct faculty members are interested in ID help and they often utilize the team to bring new learning experiences to their students.

Benefits of One-on-One Consultations

The approach using three different types of consultations with faculty is based on TPACK and previous research. The ID Team identified a number of advantages that cause positive change in the collaboration with faculty. Such individualized approach allows IDs to create long-term collaborations with faculty that may go through all three stages of the consultations depending on the current concern of the faculty.

Instructors are able to improve their course materials with the help of technology. Oftentimes, they may not be aware of the possibilities and resources that are available to them. IDs work closely with faculty and point out technology that may assist in the course design content. Undoubtedly, some of the faculty do not prefer learning new technology. However, after ID demonstrated the improvement of course content and provides some initial trainings using the tool, such approach sparks further interest in collaboration and acquisition of new technology. Thus, IDs are often rewarded as faculty are satisfied with the overall improvement of the class materials or activities.

It can be challenging to work with the faculty on alternating their pedagogical approach. Due to emergency teaching practices, instructors did not have time to readjust their face-to-face courses and transform them into online sessions. Therefore, IDs were making attempts to help in the pedagogical realignment process by sharing the insights of the other faculty members with their assigned instructors. This ID Team takes advantage of the existing practices at school that already meet the needs and the goals of the departments.

More importantly, exposure to new technology often realigns the pedagogical strategies that are used by the instructors. Understanding that there are more opportunities to diversify the content enables instructors to consider active learning activities in their classes. It is beneficial since it allows students to be exposed to a variety of activities that are still beneficial for their learning practices. A lot of professors were able to adapt their novel emergency teaching for online environments in the current face-to-face classes, as well.

Lastly, many instructors considered updating their class materials, including PowerPoint presentations because ID Team led several workshops guided towards multimedia design. Instructors became more interested in making their slides more appealing to the students. Needless to say, that with such a rapid development of multimedia and technology, students have high expectations of the content that they are exposed to. Therefore, technological modeling approach plays an important role in the content improvement.

Disadvantages of One-on-One Consultations

From the overall experience, the ID team noted that it can be challenging to move away from the technological consultations and be perceived as a team that can contribute to the pedagogical domain, as well. Emphasizing the use of technology may disregard the focus on the pedagogical approach and it can be hard to achieve the overlap in TPK component of TPACK which leaves TK as a stand-alone knowledge that is not appropriately incorporated into the course design from the pedagogical standpoint. In this case, technology is used to its minimum potential.

Another concern that the new ID Team encountered is the lack of identity of the ID experts. In some cases, the team is mistaken for IT department. In this case, the talent of the IDs may not be used to the full potential. Expertise and assistance with technological issues misleads

faculty and the communication becomes rather transactional, and it is limited to TK issues. It is important to have events that show the full potential of the team. In such cases, faculty gets a better understanding of the overall purpose of the team. As mentioned before, this ID team was created during the pandemic, and it is one of the reasons why there are some misconceptions regarding the purpose of the team.

Taking such an approach required better cooperation amongst the IDs to ensure that they provide services at the same level. The goal was to ensure that instructors have the same experience regardless of the ID that they closely work with. In order to quality check and synchronize the work of IDs, the ID Team was keeping records of the collaborations with instructors and discussing as a team each collaboration to ensure that instructors receive an appropriate consultation from each member of the team. This process is time consuming, but it allows IDs to provide peer feedback and identify the core values of the team that serve purpose to the faculty.

Conclusion

In conclusion, the use of TPACK in one-on-one faculty consultations help to improve the building of long-term relationships with instructors as the ID team takes them through all the areas to reach the final goal of the improved course design. It is quite challenging not to fall into the trap of focusing too much on TK during the pandemic as it was a necessary measure. However, these tendencies have been changing since a lot of instructors went back to face-to-face teaching and now PK becomes more of the priority. It is important to state that the pandemic itself has taken toll on IDs, instructors, and students. Thus, one-on-one consultations became a helpful way of creating a safe space for interactions that lead to fruitful collaborations. The ID team anticipates more improvements in their work with faculty as the transformations of their work together are still happening. Keeping track and records of the consultations allows IDs to reflect on their practices and ensure that they are successfully working towards the overall course design improvement as demanded by faculty needs.

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