

## COMMUNICATION IN ONLINE LEARNING ENVIRONMENTS: FRAMING ASYNCHRONOUS ONLINE DISCUSSIONS

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### ABSTRACT

Asynchronous discussion is a valuable communication tool used to engage learners in collaborative learning activities throughout an online course. Without the facilitation of a skilled moderator, online course discussions can stall and become dormant. How can we prevent this and ensure that learners engage in meaningful discussion? And, more to the point, how can we facilitate discussions that encourage and support creative and critical thinking? This paper presents information and strategies we have learned through study and “trial and error” in teaching our own classes. Many of our strategies and techniques were learned through participation and observation in online classes during our own undergraduate and graduate study. Other strategies have been refined over time through experience and feedback from our online students. We are honored to have the opportunity to share our experiences with other educators.

### INTRODUCTION

The purpose of this paper is to identify and define effective strategies for designing, managing and assessing communication in online discussions. Emphasis will be placed on framing online discussions as issues that require critical and creative thinking rather than topics that merely invite opinion. Effective online learning takes place by taking full advantage of the capabilities of interactive discussion related to course objectives.

Constructivist instructional strategies are very effective in the online learning environment (OLE). Constructivism is characterized by assimilating new information and combining prior knowledge, which modifies current understanding and allows one to apply this “constructed” knowledge to the task at hand. This is ongoing process and requires a learner-centered, active learning environment. Interactive discussion is a communication process that encourages students to learn from each other by sharing prior knowledge and experience as well as by assimilating new knowledge. In an OLE, learners have many opportunities to discuss and share both prior and new or “constructed” knowledge. As online instructors, we must know how to effectively facilitate interactive, asynchronous discussions in Online Learning Environments.

### MANAGING ONLINE DISCUSSIONS

Without interactive discussion, an online course would become just another correspondence course. Teaching

in an OLE requires a learner-centered and active learning instructional approach. One of the most effective instructional methods is to encourage learner responsibility through “teaching by discussion.” Although mini-lectures are generally used as a basis for discussion, teaching by discussion usually means guiding the learning process rather than relying on lectures. While this strategy is used to some extent in traditional classes, in the OLE it is the primary method of instruction. The instructor’s role is to guide the process, giving explanations where necessary to clarify information, as well as adding a measure of expertise to the discussions.

### **Student Orientation for Learning by Discussion**

When teaching in the OLE, it is important to remember that most students have had experience answering written questions, writing essays and opinions, and they have regurgitated course content in journals or on tests or for homework. Unfortunately, most students have had little or no experience in writing for the purpose of interactive communication and discussion. As a general rule, students expect a normal discussion to end either when material has been recited or when an opinion has been stated. The main reason for this is that, in the traditional classroom, there is usually not enough time to explore issues beyond a cursory level. Often, opinions are stated and rephrased several times, at which point “discussion” tends to become “argument.” Most students tend to view discussions as statements of opinion about a topic rather than as an issue to be explored. Therefore, once all opinions have been stated, the “discussion” is over. Students generally do not view discussions as being reflective, exploratory or constructive.

The first step in familiarizing students with the process of learning by discussion is to teach them to think of discussions as exploring the deeper issues related to a topic rather than just stating their opinions on the subject. This encourages them to think in terms of exploring problems or ideas that need to be investigated rather than just stating opinions.

The next step is to teach students to think critically and creatively, to reflect on what they will say as well as what others say, and to be able to back up their statements with facts and documentation. In online teaching, the instructor’s most important job is to guide students into discussions that are more than simply opinions about the topic content. When students are required to respond with more than mere opinions, they are obliged to expand their responses, ask for explanations, and support their responses with citations from reading assignments or from their own research. Instead of just reciting information, students are being taught to assimilate information, construct knowledge and then apply it to relevant issues.

Obviously, this is not going to happen spontaneously or even in the first week or two of class. Initially, most new online students will simply answer discussion questions superficially. When this happens, discussions can quickly fizzle out. This is where the role of the instructor as facilitator is critical. The instructor must intervene and examine students’ answers and comments, ferret out issues relevant to what was said, and post these in the form of further comments and/or questions that require further probing by the students.

Instructors need to frame questions in such a way that the assigned reading material alone will not give them all the answers. This requires that students do some additional research in order to frame a significant response. This strategy encourages students to independently explore the issue in more depth. Since new issues will now originate in their discussions, students become more interested and involved in the outcome of the discussion and will start providing more comprehensive responses. This effective strategy will get them started and keep the discussion going, but how do instructors keep the discussion on track and ensure that learning is taking place?

## **TIPS FOR FACILITATING ONLINE DISCUSSIONS**

Online discussions, just as discussions in traditional classrooms, often take on a life of their own. Instructors must maintain the flexibility to “go with the flow” as long as the new direction is relevant to the topic or course objectives. This allows students to take control of their own learning because they will talk about what interests them in relation to the lesson content. An added bonus is that they will often go a direction that would never have occurred to the instructor. This happens because students assimilate the new information, append it to their prior knowledge and make it relevant by applying the “constructed” knowledge to their own life experience. By sharing individual knowledge and experience, new knowledge is constructed as students learn from each other. Effective instructors understand that this can occur in any class where diverse people are allowed to explore issues.

Facilitation skills become extremely important as discussions evolve in the OLE. Facilitation does not actually begin with the discussion however; it begins with framing the discussion questions.

### **Framing questions for online discussions**

Interactive communication is vital to learning in the OLE and the first step in facilitating effective learning discussions is designing effective questions. By using Bloom’s Taxonomy as well as the Taxonomy of Socratic Questioning as guides, instructors can frame questions so that students are not merely stating facts or opinions but are, instead, critically evaluating their own and their classmates’ responses. This, in turn, leads to substantive discussions as the instructor, through skilled facilitation, turns simple topics into issues to be explored, researched and critiqued as students begin to assimilate the information and knowledge into their own experiences and prior knowledge.

Socratic questioning is a method of using questions that provide the opportunity to think critically and creatively so that students are discussing ideas, statements, and issues related to a topic, rather than just taking a cursory look at the topic itself. Students are given the opportunity to express their own thoughts in their own words, as well as the opportunity to explore issues in depth. There are several different kinds of questions used in this method, all of which encourage a deeper, wider exploration of issues. Examples of each of the following types of questions can be found in the Resources.

- Clarification Questions
- Questions about Initial Issue
- Assumption Probes
- Reason and Evidence Probes
- Origin or Source Questions
- Implication or Consequence Questions
- Viewpoint Questions

Another method that is often used in both direct instruction and also in teaching questioning techniques to students is Bloom’s Taxonomy. The following chart has been adapted from Bloom, B.S. (Ed.). (1956).

*Taxonomy of educational objectives: The classification of educational goals: Handbook I, cognitive domain.*

New York; Toronto: Longmans, Green. It can be found at the Learning Skills Program, University of Victoria:

<http://www.coun.uvic.ca/learn/program/hndouts/bloom.html>.

**Table 1**

<b>Competence</b>	<b>Skills Demonstrated</b>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>● observation and recall of information</li> <li>● knowledge of dates, events, places</li> <li>● knowledge of major ideas</li> <li>● mastery of subject matter</li> <li>● <i>Question Cues:</i> list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.</li> </ul>
<b>Comprehension</b>	<ul style="list-style-type: none"> <li>● understanding information</li> <li>● grasp meaning</li> <li>● translate knowledge into new context</li> <li>● interpret facts, compare, contrast</li> <li>● order, group, infer causes</li> <li>● predict consequences</li> <li>● <i>Question Cues:</i> summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend</li> </ul>

**Table 1, continued**

<b>Application</b>	<ul style="list-style-type: none"> <li>● use information</li> <li>● use methods, concepts, theories in new situations</li> <li>● solve problems using required skills or knowledge</li> <li>● <i>Questions Cues:</i> apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover</li> </ul>
<b>Analysis</b>	<ul style="list-style-type: none"> <li>● seeing patterns</li> <li>● organization of parts</li> <li>● recognition of hidden meanings</li> <li>● identification of components</li> <li>● <i>Question Cues:</i> analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer</li> </ul>
<b>Synthesis</b>	<ul style="list-style-type: none"> <li>● use old ideas to create new ones</li> <li>● generalize from given facts</li> <li>● relate knowledge from several areas</li> <li>● predict, draw conclusions</li> <li>● <i>Question Cues:</i> combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if?, compose, formulate, prepare, generalize, rewrite</li> </ul>
<b>Evaluation</b>	<ul style="list-style-type: none"> <li>● compare and discriminate between ideas</li> <li>● assess value of theories, presentations</li> <li>● make choices based on reasoned argument</li> </ul>

- verify value of evidence
- recognize subjectivity
- *Question Cues*  
assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize

These questioning strategies place the emphasis on student understanding rather than on the teacher as the “sage on the stage.” The focus is on assimilation and formation of new knowledge with prior knowledge so that students now have their own interpretation based on this new “construction.” Watching learners take an issue, assimilate and analyze it, and add more dimensions to it as they discuss and critique each issue is an extraordinary and rewarding learning experience for both student and instructor.

### **I’ve designed the questions - Now what?**

Instructors must also model good discussion techniques for learners. This means becoming part of the discussion without being overbearing or taking over. Instructors should guide the discussion, not turn it into another lecture. They should summarize points where appropriate and follow up with more questions that encourage learners to delve deeper into the issues. Effective instructors do this all the time in traditional classrooms. It is second nature to ask questions while learners are discussing something in class. With experience, instructors get to the point where they can automatically sense where learners are headed with their discussions, so they can maneuver them in the right direction.

Here are a few examples of traditional classroom strategies that can be transferred to online discussions:

- Sequence discussions so that each one flows into the next in a logical progression. This may mean only posting one discussion prompt at a time and following with others as you ascertain how and where the discussion is going.
- Set start and stop dates
- Require participation
- Set expectations up front about participation guidelines and acceptable behavior
- Ask learners to post summaries periodically throughout the discussions
- Ask them to expand upon their original answers to promote reflective thinking
- Show them how to cite, quote, and paraphrase others’ comments in their summaries
- Don’t let them get sidetracked into arguments (stating their *opinions* over and over in different words)

### **To what extent should I participate in discussions?**

This is an important question that has perplexed many online instructors. The answer is that, since each class has its own dynamic, the instructor’s participation is different for each class. What works well for one class may not necessarily work for another. An online instructor must be able to find in each class the proper balance between “talking” too much and not “talking” enough (and this is not as simple as it seems). The general assumption is that if a discussion is going well, it is better for the instructor to allow the discussion to evolve without interference. Personal emails can be sent to those students who are not participating or to those who seem to “hog” the discussion, so that such communications do not affect the flow of the discussion.

Sometimes in a vibrant and meaningful discussion, the instructor's presence can serve to shut down the process rather than enhance it. This is because self-guided, independent students generally see the instructor's role as one of summarizing and putting closure to the lesson. In this environment, the instructor must know how to exhibit involvement without interrupting the flow of conversation. However, if there is little or no interaction at all from the instructor, then learners feel that the instructor is too busy to bother with the course. All online learners, regardless of age, need to sense the instructor's presence. They need to feel that the instructor is "listening" and paying attention. Bear in mind that students are not shy about letting their feelings be known about instructor participation when instructor/course evaluations appear at the end of the course.

What about a discussion that is going well, and in which the instructor is NOT needed? How is the learner's need to "see" the instructor satisfied without inhibiting the process? Very simply, the instructor can provide the acknowledgement and encouragement that students need through comments such as "Good point, to which article are you referring?" or "That's an interesting statement. Would you mind clarifying and expanding it?" This type of instructor participation is needed even if discussions are going well, and even more so in discussions that are stalling or drifting.

There are many factors that can cause discussions to stall or drift, including group dynamics, age of students, relevancy and interest in the topic(s). Sometimes even the timing of a particular discussion within the course schedule can have detrimental effects on students' participation. For example, if an important issue is to be discussed during a week when a position paper is also due, then it stands to reason that the discussion will be rather limited that week.

Here is a personal experience that we had that is directly related to the issue of scheduling discussions: In one class we took together in our Masters program, we had a unit in which we were to prepare a group debate. Several discussion topics were also posted during that same week. Since group collaboration takes a great deal more time than discussion, most of us spent more time preparing our debates than taking part in substantive discussion.

The lesson here is that organization and correlation of class written assignments and discussions must be carefully planned to optimize the time spent on each.

In those cases in which a discussion just does not go anywhere in spite of the instructor's best facilitation efforts, it may be better to just move on to something else. When this occurs, it is better to chalk it up to an instructional learning experience rather than to try to force the issue with students who have no interest in the discussion.

Finally, how much instructor participation is too much? It is neither necessary nor advisable to respond to every student because this clutters up discussion threads and can serve as a distraction. It is, however, prudent to ask for clarification where appropriate and to insert some level of "expertise" into the discussion, as well as to provide simple acknowledgement. The instructor should always leave "footprints" throughout the discussions. It is a balancing act for the instructor, leaving footprints without distracting the flow of conversation, and it takes practice. As we learn and apply this, we find that it is well worth the effort because learners will explore, reflect, and truly discuss issues, and we become more effective facilitators of online interactive communication.

## **ASSESSMENT OF ONLINE DISCUSSIONS**

Assessment of discussions has been the topic of an ongoing debate among online instructors and learners for quite some time. Assessment in this environment can be very subjective, just as with most written assignments. It is up to the individual instructor to decide what will be assessed and how it will be done. Will it be quality or quantity? Are learners assessed by how many times and how much they post in discussions or are they assessed according to what they say and how they say it? Or will it be a combination of both? Discussion threads can be used for both formal and informal assessment and each instructor must decide the best method(s) based on each class.

There are a variety of activities that lend themselves quite well to online discussions. These include case studies, brainstorming, role-playing and reaction or position papers. One tenet of constructivism is collaborative learning, which, in the online learning environment, depends strongly upon interactive communication.

It is the instructor's responsibility to properly design effective discussions, monitor and bring them to closure – and this includes assessment. Active learning activities can be designed to provide evidence that students are able to use their knowledge in context. Planning specific discussion activities with assessment in mind makes assessment a much easier task. Assessments can be collected throughout the duration of a course in order to give a more complete picture of what students have actually learned.

While there will always be differing viewpoints on quantity versus quality as a way of assessment, both can still be excellent measurements of cooperative, active learning. Quality may seem a more subjective assessment; however it affords both the student and facilitator an excellent method of measuring understanding, especially when tied into specific assessment rubrics that have been provided to the students. The important thing to remember about assessment is to be sure, going into every discussion, that learners know whether assessment will be based on participation, product, or both, and how much it will count toward their grades. With well designed rubrics, the teacher can show the student what will be assessed and how it will be evaluated. Sample rubrics are included in the Appendix.

## **FEEDBACK, FEEDBACK, FEEDBACK!!!**

The number one learner complaint in online courses is the lack of feedback. There are two remedies for this: instructional feedback and acknowledgement (personal feedback).

### **Instructional Feedback**

Instructional feedback is essentially an assessment of performance and achievement of learning objectives. This type of feedback must be timely and often. In our current educational system, students work for grades. They have been conditioned to NEED this type of feedback on a regular basis. It brings them a sense of security in the learning environment. Graded assignments should be interspersed throughout the course, and learners need to receive grades on these assignments within a relatively short period of time.

### **Acknowledgement**

Acknowledgement simply means making a personal statement every now and then that says “good job” or “you’re on the right track here.” This type of feedback can occur throughout discussions and can also be accomplished through the use of emails and Learning Journals. Personal emails to individuals expressing

encouragement or praise go a long way in keeping students interested and motivated.

## CONCLUSION

The most important aspect of effective online learning is interactive communication. The personal aspect of communication can be lost in an online environment if the instructor does not take strong measures to make sure the class becomes a community. Discussion and collaboration are all well and good, but both will fall flat if students do not know and feel comfortable with each other and with the instructor. This means that, beyond course content discussions, students must get to know one another and the teacher in a more personal manner, just as they do in a traditional class.

Instructors can ensure that this occurs by creating an atmosphere of caring, acceptance, and openness to new ideas, and ....yes, even challenges from students. If we want our students to think critically and creatively, then we must provide an appropriate atmosphere for that kind of interaction. Instructors should provide lots of opportunities for students to get to know each other outside of class discussions. Tell them about yourself by writing little personal snippets in your “lectures” and discussions as well as in your introduction. This makes it easier for your students to see you as a real person rather than just a name on the screen, albeit one who is in charge of their learning.

Always give prompt feedback, and do it often. Make assessment an ongoing process that occurs throughout the duration of the course. Provide students with assessment rubrics so that they not only know how they will be graded, but they will also know what is required to achieve success in the course. An instructor’s primary goal should be to help students succeed by becoming independent, life-long learners. This, after all, is the purpose of teaching.

Finally, do not be afraid to encourage and request feedback from students as well. After all, successful teachers learn as much from their students as the students learn from them!

## APPENDIX

### Discussion Rubric

(used by permission of [Burke Cochran](#), Sonoma State University)

Points	Participation in Discussion
4	Provides comments and new information in a regular and equitable manner. Interacts with a variety of participants by posting queries, comments, and thoughtful responses
3	Provides comments and some new information in a fairly regular manner. Interacts with a few selected participants by posting queries, comments, and thoughtful responses
2	Sporadically provides comments and some new information. Interacts with only one or two participants by posting queries, comments, and thoughtful responses

1	Provides minimal comments and information to other participants. Participates infrequently in on-line discussions or e-mail; and postings are irrelevant or superficial
<b>Points</b>	<b>Content of Posting</b>
4	Revealed a solid understanding of the topic as evidenced by thoughtful responses and questions
3	Revealed adequate understanding of the topic as evidenced by posts indicating superficial knowledge
2	Revealed a restricted understanding of the topic limited to information that could be derived from prior posts
1	Message was unrelated to discussion
<b>Points</b>	<b>Critical Thinking Evidenced by Posting</b>
4	Offered a critical analysis of an existing posted idea or introduced a different interpretation to an existing idea
3	Agreed or disagreed with existing discussion and provided limited justification/explanation
2	Agreed or disagreed with existing discussion but provided no justification/explanation
1	Provided no evidence of agreement or disagreement with existing discussion

### Group Process Rubric

(available online from Prentice Hall School)

	<b>Exceptional</b>	<b>Admirable</b>	<b>Acceptable</b>	<b>Amateur</b>
<b>Group Participation</b>	All students enthusiastically participate	At least 3/4 of students actively participate	At least half the students confer or present ideas	Only one or two persons actively participate
<b>Shared Responsibility</b>	Responsibility for task is shared evenly	Responsibility is shared by most group members	Responsibility is shared by 1/2 the group members	Exclusive reliance on one person
<b>Quality of Interaction</b>	Excellent listening and leadership skills exhibited; students reflect awareness of others' views and opinions in their discussions	Students show adeptness in interacting; lively discussion centers on the task	Some ability to interact; attentive listening; some evidence of discussion or alternatives	Little interaction; very brief conversations; some students were disinterested or distracted
<b>Roles Within Group</b>	Each student assigned a clearly defined role; group members perform roles effectively	Each student assigned a role but roles not clearly defined or consistently adhered to	Students assigned roles but roles were not consistently adhered to	No effort made to assign roles to group members

### Group Product Rubric

(available online from Prentice Hall School)

	<b>Exceptional</b>	<b>Admirable</b>	<b>Acceptable</b>	<b>Amateur</b>
<b>Organization</b>	Extremely well organized; logical format that was easy to follow; flowed smoothly from one idea to another and cleverly conveyed; the organization enhanced the effectiveness of the project	Presented in a thoughtful manner; there were signs of organization and most transitions were easy to follow, but at times ideas were unclear	Somewhat organized; ideas were not presented coherently and transitions were not always smooth, which at times distracted the audience	Choppy and confusing; format was difficult to follow; transitions of ideas were abrupt and seriously distracted the audience
<b>Content Accuracy</b>	Completely accurate; all facts were precise and explicit	Mostly accurate; a few inconsistencies or errors in information	Somewhat accurate; more than a few inconsistencies or errors in information	Completely inaccurate; the facts in this project were misleading to the audience
<b>Research</b>	Went above and beyond to research information; solicited material in addition to what was provided; brought in personal ideas and information to enhance project; and utilized more than 8 types of resources to make project effective	Did a very good job of researching; utilized materials provided to their full potential; solicited more than 6 types of research to enhance project; at times took the initiative to find information outside of school	Used the material provided in an acceptable manner, but did not consult any additional resources	Did not utilize resources effectively; did little or no fact gathering on the topic
<b>Creativity</b>	Was extremely clever and presented with originality; a unique approach that truly enhanced the project	Was clever at times; thoughtfully and uniquely presented	Added a few original touches to enhance the project but did not incorporate it throughout	Little creative energy used during this project; was bland, predictable, and lacked “zip”
<b>Presentation Mechanics</b>	Was engaging, provocative, and captured the interest of the audience and maintained this throughout the entire presentation; great variety of visual aids and multimedia	Was well done and interesting to the audience; was presented in a unique manner and was very well organized; some use of visual aids	Was at times interesting and was presented clearly and precisely; was clever at times and was organized in a logical manner; limited variety of visual aids	Was not organized effectively; was not easy to follow and did not keep the audience interested; no use of visual aids

## ADDITIONAL RESOURCES

*Teachers.net Gazette Articles*

Assessment in Online Learning – An Overview

<http://teachers.net/gazette/JUL02/conway.html>

Communication in Distance Learning

<http://teachers.net/gazette/APR01/bowman.html>

Interaction in the Online Classroom

<http://teachers.net/gazette/NOV01/bowman.html>

Text-Based Communication

<http://teachers.net/gazette/MAR02/bowman.html>

### ***Web Resources***

“A Framework for Designing Questions for Online Learning”

<http://www.emoderators.com/moderators/muilenburg.html>

A Rubric for Assessing Interaction in Distance Learning

<http://www.westga.edu/~distance/roblyer32.html>

Assessment of Online Participation: Quality vs Quantity

<http://online.mq.edu.au/pub/CFLTOM/assess.html>

Asynchronous Anxiety or Worried in Cyberspace: I Wonder If My Teacher Got My Email?

[http://leahi.kcc.hawaii.edu/org/tcc\\_conf97/pres/crouch.html](http://leahi.kcc.hawaii.edu/org/tcc_conf97/pres/crouch.html)

Bloom’s Taxonomy

<http://www.coun.uvic.ca/learn/program/hndouts/bloom.html>

Best Way to Grade Online Interaction?

<http://leahi.kcc.hawaii.edu/org/occ/logs2/0189.html>

Effective Online Moderators

<http://www.plymouth.edu/psc/infotech/webct/moderate.shtml>

Establishing a Shared Set of Criteria & Dimensions for Analyzing Online Discussions

[http://wise-discuss.berkeley.edu/cilt/dsc/final\\_index.html](http://wise-discuss.berkeley.edu/cilt/dsc/final_index.html)

Facilitating Online Discussions

[http://interwork.sdsu.edu/courses/distance/facilitator/lessons/online\\_facilitation.html#Moderator%20Guidelines%20for%20Online%20Discussions](http://interwork.sdsu.edu/courses/distance/facilitator/lessons/online_facilitation.html#Moderator%20Guidelines%20for%20Online%20Discussions)

Keeping Teachers' Voice in Balance

<http://www.ntlf.com/html/lib/suppmat/83brook.htm>

Keys to Facilitating Successful Online Discussions

<http://www.uwsa.edu/ttt/raleigh.htm>

Online Discussion Evaluation Rubric

[http://www.sonoma.edu/people/cochran/edu484/post\\_rubric.html](http://www.sonoma.edu/people/cochran/edu484/post_rubric.html)

Socratic Questioning Cheat Sheet

<http://okra.deltast.edu/~bhayes/socratic.html>

What to Watch for When Moderating a Discussion

<http://www.learner.org/courses/rfts/facwht.htm>

## ABOUT THE AUTHORS

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### Credentials:

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Mr. Conway has been training others in the use of technology for over two decades, and has been involved in bilingual education and ESL for nearly ten years. He is involved in online learning at IVC and with other online providers as well. Recently, the Senior English Language Fellow of the U.S. Department of State recruited Mr. Conway to teach the Media, Technology, and Language Acquisition course in the TEFL Certification program at CETYS Universidad Centro de Idiomas, located in Mexicali, Mexico.

Licensure:

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