

# Hearing the Voices of ILRN What We Learn from Listening

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**Abstract.** This article explores the nature of work that the membership of ILRN is undertaking. Through an analysis of survey results and podcast recordings, this article lays out the key areas where the respondents have undertaken work, what they wish in terms of their next steps and what they view as the biggest questions yet to be answered in the field. A review of these results indicate that there are vast areas of potential for the field as a whole, but we have to navigate some of the growing pains inherent in a relatively young field of study.

**Keywords:** Listening, Immersive Learning, Survey, Podcast.

## 1 Introduction

### 1.1 The Importance of Listening

“Wisdom is the reward you get for a lifetime of listening when you would have rather talked.”

Doug Larson

As with many academic I know, I am more than happy to stand in front of a group of people and talk at them for what may seem an interminable amount of time – at least to the people doing the listening. Additionally, my students would likely say that I am prone to tangents and “soapbox standing” on occasion, however, they would likely be a bit more diplomatic about their wording. If I am honest with myself, my default position in front of a group is to be the one talking, not the one listening. The common platitude that every first year teacher can repeat back without delay is that they should be “The Guide on the Side, not the Sage on the Stage.” And while I agree in general with that axiom (as ill-defined as it may be), I must admit that I do not always follow its edicts. Of course, as with almost all things, balance is the key. It is perfectly fine to be the lecturer, as long as lecturer is not all you are.

However, as Doug Larson (as quoted by Meah, 2018) so artfully stated, wisdom comes from listening, not talking. As such, the purpose of this article is to describe the results of my efforts to listen more – specifically, to listen to the voices making up the Immersive Learning Research Network (ILRN). What wisdom would those voices provide? What lessons might be gleaned from better understanding the work that is already

being done into immersive learning, and how might those lessons most effectively and efficiently be disseminated to the widest audience? This article is intended to take a first step towards answering these questions.

## 1.2 The Nature of the Conversations

There are two distinct types of opportunities for listening that this article will describe. The first of these is an online survey and the second is a series of conversations between scholars that has been released as a weekly podcast since 2015.

**Survey.** Birthed out of a desire to better understand the current work that is being undertaken by the membership of ILRN, a survey was administered during the spring of 2018. This survey was sent electronically to every individual on the ILRN membership email list. It gathered information on the background of the participants, the nature of the research work they undertake, and the future directions they wish to move towards as they progress in their careers. The specific questions that were asked on this survey are as follows:

- Where are you physically located?
- What is your field of study?
- How long have you been working with immersive technology?
- What variables and/or phenomena do you explore in your work?
- What methodologies do you use in your research?
- What are your data (unit of study)?
- What kinds of hardware do you use in your work?
- What kinds of software do you use in your work?
- Have you received any sort of external funding for your work?
- What are some future directions for your work?
- What do you consider the biggest unanswered questions in your area of study?

**Podcast.** The second source of information that this article will describe is the conversations undertaken as part of the ILRN-supported podcast, *The Versatelist*. This podcast consists of a series of weekly conversations with scholars in various immersive learning fields. The nature of these recorded sessions is conversational in tone, and the individual who is being interviewed guides the substance of each recording. This podcast series has been live since the summer of 2015.

Interviewees are identified through the ILRN membership lists along with a series of Google Scholar alerts associated with the terms “Augmented Reality + Education,” “Virtual Reality + Education,” and “Immersive Learning.” These alerts result in the regular delivery of an email digest of the most recent articles published in these fields. The author(s) of those articles that appear interesting are contacted and invited to participate in the podcast recording. Each recording is usually between 30 and 40 minutes long, and consists of a short introduction to the guest, a longer discussion of their work, and a concluding segment intended to give them an opportunity to discuss the areas of concern within their field that they are trying to “fix” with their work.

## 2 Methodology

### 2.1 Analyzing Survey Results

The survey results consisted almost entirely of qualitative responses to open-ended questions. As such, a thematic qualitative analysis was conducted to determine themes that emerge from repeated readings of the responses. The results of this analysis were then quantified to demonstrate where the major consensus was held within the answers to a particular question (if there was such a consensus).

### 2.2 Analyzing Podcast Content

A database of the podcast recordings has been maintained over time, containing the guest name(s), the title of the work that they were discussing, and their physical location. This database was also coded thematically in terms of the topics that have been focused upon so far on the podcast. Additionally, a geographic breakdown was developed to determine where the interviewees are located.

## 3 Results

### 3.1 Survey Results

A total of 56 responses were returned for the ILRN survey. Although this is a very small response rate given the size of the ILRN membership email list, it would still be considered a starting point for the conversation. It is difficult to know how representative this sample is of the larger ILRN population, but it can safely be assumed that it consists of academics that are highly motivated to take part in the conversation.

**Location, Field of Study, and Experience.** The first three questions on the survey asked for general demographic information about the respondents. The sample was weighted heavily towards European (50%) and North American (30%) respondents, making up more than 80% of survey participants. Unsurprisingly, similar percentages of the respondents indicated that they came primarily from the academic fields of Education, Computer Science, and the Humanities (79%), and had fewer than 15 years worth of experience researching immersive learning technologies (82%).

**Variables.** There was no clear consensus in terms of the variables that were studied. The responses for this particular question varied greatly and included the expected topics such as motivation, engagement and learning while also including more granular topics such as foreign language anxiety, evolution, and heritage.

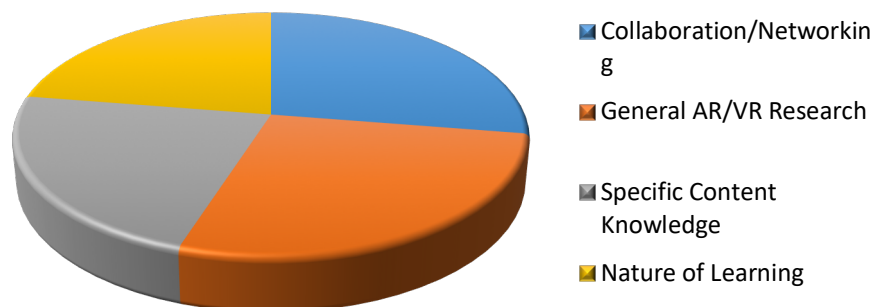
**Methodologies.** As with the responses concerning variables, there was no clear consensus in terms of the methodologies used to study them. The responses for this particular question varied greatly and included the expected qualitative, quantitative, and

mixed-methods approaches. In several cases more specific examples were provided, such as virtual ethnography, Action Research, Covert Turing Tests and Cultural Historical Activity Theory, but the general response indicated relatively traditional qualitative and quantitative approaches, with neither being a clear favorite of respondents.

**Hardware.** Unlike previous areas, there was a clear consensus in the area of what hardware was used. As would be expected, the majority of respondents identified their preferred computer system – although no clear preference was identified for Windows or Mac machines. Following that category was the use of some sort of Head Mounted Display (HMD), which was identified within 48% of responses. The most popular HMDs that were specifically identified were Oculus Rift and HTC Vive. The third most common category of technology was mobile devices of some sort (phone, tablet, laptops), which were identified within 34% of responses.

**Software.** In this particular area there was also a general agreement that Unity 3D (43%) was the software of choice. OpenSimulator (16%) and Second Life (9%) were distant second and third choices.

**Future Directions.** When asked directly about what future directions the respondents would like to take for their work, some intriguing opportunities presented themselves. There was no clear consensus around a single issue, but the responses did solidify around four areas: Collaboration/Networking, General AR/VR technical research, Specific Content Areas (such as Language Learning) and the Nature of Learning within immersive settings. Some variation of these four categories was identified on 80% of survey responses. As can be seen in Figure 1, none of these four categories clearly outstripped any other.



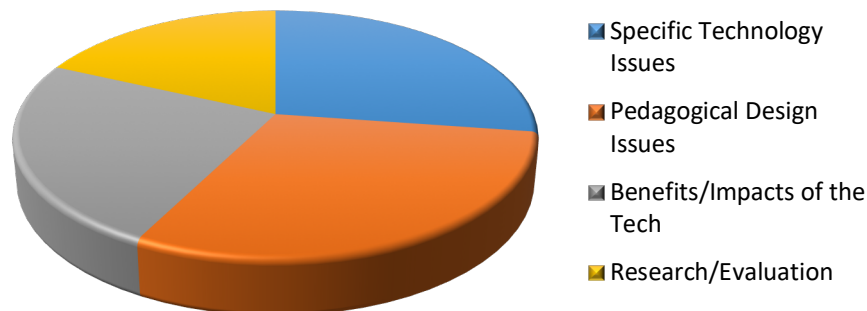
**Fig. 1.** Distribution of four most commonly identified directions for future research

To a lesser extent, participants identified evaluation practices or specific technology issues (9% each) or game-based learning (7%) as their next professional step.

**Unanswered Questions.** The responses to this particular question also mirrored the response to the future research in that there was no clear consensus on one area. Interestingly, however, these categories differed from what respondents thought of as their next step in their research agenda. Specifically, the responses for this question, which accounted for 57% of responses, focused on the following four areas:

- Specific Technology Issues (that is, “How do I get tech X to do what I want it to do?”)
- Pedagogical Design Issues (that is, “What instructional designs will benefit from these technologies?”)
- Benefits and Impacts (that is, “Is this technology even worth it?”)
- Research and Evaluation (that is, “What are the most effective approaches to studying these issues?”)

As can be seen in Figure 2, there was relative balance across these four areas when they were identified as the biggest remaining question.



**Fig. 2.** Distribution of four most commonly identified “biggest unanswered” question

To a lesser extent, respondents identified Learning Theory issues (7%), Specific Content Learning (5%), Scalability & Portability (5%), Funding (3%), Gender Issues inherent in the technology (3%), and Embodiment (3%) as unanswered questions waiting to be explored.

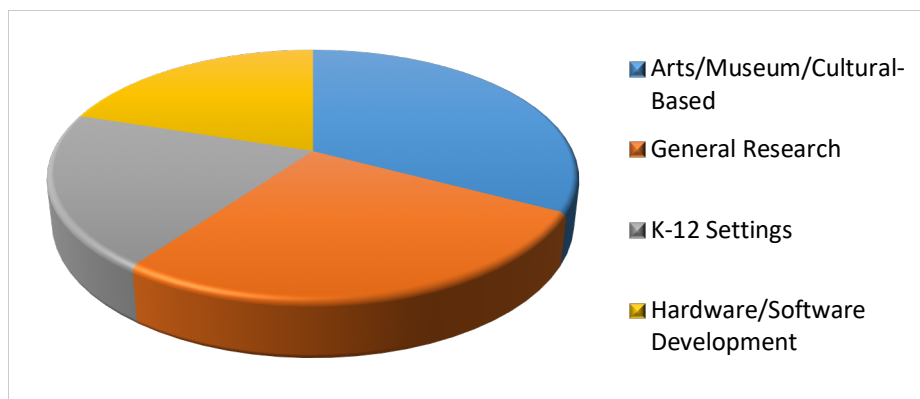
### 3.2 Podcast Results

As mentioned previously, there have been 120 episodes of the Versatelist podcast to date. Fifteen of those released episodes were removed from the analysis due to the fact that they represented recordings of ILRN Conference-based material (such as

conversations with ILRN Board Members about upcoming conferences or recordings of presentations given at prior ILRN conferences). The remaining episodes were analyzed thematically based on their content, and the geographic representation for interviewees was determined.

**Location.** As with the survey respondents, the majority of interviewees for the podcast were from either North America (53%) or Europe (27%), while Australasian participants comprised the third largest group (11%) followed by Asia (7%).

**Content Analysis.** The content analysis indicated that there was no predominant area that the podcast interviews focused upon. As can be seen in Figure 3, the four most common topics were Art/Museum/Culture, General AR/VR Research, Usage in K-12 Settings, and Hardware/Software Development. These four areas combined to account for 65% of the podcast recordings.



**Fig. 3.** Distribution of four most common content themes from podcast recordings

Additional themes that were the subject of podcast recordings are the use of these technologies in Engineering, for disabled individuals, for literacy instruction, within medicine, at the college level, and to facilitate physical activity.

## 4 Analysis

It is important to understand that drawing conclusions about the field as a whole from what amounts to a relatively small sample size is fraught with difficulty and should not be undertaken lightly. Having said that, however, there are insights that can be gleaned from these data, and if we listen to it carefully we may be able to gain some of the wisdom we all desire.

#### **4.1 How do we Listen Effectively and Efficiently?**

The first insight to explore is what we can learn from such diversity in the case of variables and methods. The fact that there is very little consensus within these areas should not surprise us given the fact that we are working in a relatively young field. One might quibble that some form of “immersive learning” has been around for decades and decades, but the reality is that most of us have been working in the field for fewer than 15 years (at least according to the survey results), and a field of study such as this is bound to be a bit disjointed and unstructured. In fact, and quite honestly, this lack of focus could be seen as a strength rather than a weakness. It is through exploring the numerous facets and directions that we will get a better picture of the landscape.

The issue we confront here, though, is the difficulty that this “disjointed-ness” creates in terms of learning from each other. The fact that so many of us are still researching variables such as motivation, engagement and “learning” would indicate that either those issues are not yet settled or that we are not aware of work already done to answer those concerns. I would argue that these issues have largely been covered – in fact, some of the earliest work in educational uses of Augmented Reality dealt with its effect on engagement and motivation (Dede, 2009; Dow, et al., 2007; Dunleavy, Dede, & Mitchell, 2009; Squire & Klopfer, 2007, to name a few). Thus there is a good deal of work to do on getting that word out effectively. It is perfectly fine in a young field of study to re-tread ground that has already been covered, but over the long-term that does not lead to much forward momentum.

If we were to accept this as true, then the next logical question is “How do we get better at learning from each other so that we don’t continue to cover the same ground?” Perhaps unsurprisingly given the title of this particular article, my answer to that question would be founded in our ability to listen to each other. There are numerous means through which we can get the word out about our own work – we publish articles, chapters and books, we give presentations at conferences, we teach, and we use social media (among other possible avenues). But the reality of the situation is that this process is fundamentally a “loud” process. There are so many avenues for disseminating results that it becomes difficult to identify any particular subset of them that makes sense to follow to get the whole picture. In essence, we have lots of means to “talk” but very few ways to “listen” efficiently and effectively. The result of this is a natural tendency to follow those voices in our own specialized field, but by doing so we run the very real risk that we are creating echo chambers where we are missing important outside voices that could provide context to help us move forward.

#### **4.2 Aligning Next Steps with Unanswered Questions**

Another insight that I would highlight from this data is the disconnect between how we view ourselves as researchers and how we view the field as a whole. There is very little reason to disagree with the next steps that individuals have identified in their own practice. After all, we make our choices about our research agendas based on our own interests and circumstances. Likewise, there is little reason to question the perceptions of the group concerning the big unanswered questions in their fields. Those people closest

to the problem are likely to be the best suited to identify the issues associated with the problem.

However, we should recognize the disconnect between what we see as the unanswered questions and the steps that we are taking professionally. The survey responses indicate a need to answer questions like “What instructional designs will benefit from these technologies?”, “Is this technology even worth it?”, and “What are the most effective approaches to studying these issues?”. But our own focus moving forward is much more granularly on things like creating and building professional networks for collaboration and using these tools to teach content like foreign language and cultural awareness.

Obviously, an argument could be made that each of the steps that we take in our own research is a step towards answering the biggest questions out there. In fact, I wouldn't argue with any researcher who stated that explicitly. After all, the saying “a journey of a thousand miles starts with a single step” is true on its face. The difficulty here is that the opposite is not by necessity true. A single step does not always lead to a thousand-mile journey. It is only through understanding the overall objective that we can effectively plan out how each step leads us to answering the unanswered questions in the field.

### **4.3 Expanding the Community**

Another result from both the survey and podcast analysis that stands out is the clear over-representation of European and North American voices in the conversation. The fact that approximately 80% of survey respondents and podcast interviewees are drawn from these geographic area would seem to be a clear indication that voices from outside these areas are missing. It is quite a stretch to believe that this is by design, so the intent here is not to ascribe ill-intent, however, it is imperative that we expand the community. There is exciting work that is taking place in Asia, South American and Africa in the field, and making a more concerted effort to bring those voices to the table will provide invaluable context for how to address the biggest questions at hand.

The means through which this is accomplished would appear to require active participation on the part of the leadership of the community as it is presently constructed. As a start to that process, thought leaders from these geographic areas should be approached and actively recruited to participate. These individuals would then be able to recruit other scholars from their regions to participate. In order to ensure the best chance for success in this endeavor, there is a need to think about structures that would incentivize participation. This could include key speaker slots at conferences and positions on the ILRN Board, but it may also include more mundane concerns such as a more inclusive meeting schedule for time zones in Asia and Africa.

## **5 Conclusions**

This is clearly a very exciting time to be involved in immersive learning. The tools are developing and expanding rapidly. The field of research is relatively new and the community of people working on these issues is still small enough that an effective and



vibrant network can be developed. There is a sense that these tools can act as the agent to facilitate large structural changes in how we educate each other. All of that in mind, it would be difficult to not be excited about the possibilities.

The purpose of this article is not to put the brakes on that excitement. In fact, I see it as quite the opposite. The reality of the situation is that we have opportunities to tap potential we do not even know about yet. The main impediment that I see to making rapid advances is that we are insolated in our domain silos and do not search out views from outside that silo. We need to find ways to effectively learn about what people outside of our particular specialization are working on. Organizations such as ILRN are an effort to break down those walls, but more work is clearly needed. A secondary concern is that we might spend too much time talking at each other, and not enough time listening. If there is a “call to arms” to be found in this paper it is that we should be working on building into our organizational structures the systematic means through which we can listen. After all, that is the fastest way to wisdom.

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