



Full Research Report:

HYBRID LEARNING

How to Engage Learners and Produce Real Outcomes

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Source: "Hybrid Learning: How to Engage Learners and Produce Real Outcomes"

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A Hybrid Workforce Requires a Hybrid L&D Solution

Building an Effective Hybrid L&D Solution and Addressing the Concerns about Hybrid Work (at the Same Time)

As we open 2024, more than 25% of all labor hours delivered globally will be delivered remotely, and more than 25% of the workforce operates in a hybrid (part in-office, part remote) work environment.¹ The percentage of fully remote workers and those working in a hybrid arrangement has largely stabilized (at least in the US¹) since 2022, and most workers (and most corporate leadership, with some notable exceptions²) expect that hybrid work is here to stay. Organizational research is now turning to the questions of the optimal composition of a hybrid work schedule—with the few early indicators suggesting that somewhere between 2-3 days each week will be remote. Those organizations that will be most successful will be those that implement hybrid work effectively.³

That's not to say hybrid work does not have its own unique challenges—most noted among them the inability to transfer corporate cultureⁱⁱ and facilitate interpersonal and cross-functional collaboration.ⁱⁱⁱ Indeed, a review of recent organizational behavior research on the effects of remote and hybrid work presents a mixed bag of results that often conflict with each other.⁴ To provide some clarity, InSync has pursued a line of research that accepts *prima facie* the concerns expressed by workers and senior leadership about remote work and that sought to further refine the perceptions, concerns, and effective solutions of learning and development in a hybrid work environment. As it turns out, workforce training may provide the most effective tool to address the concerns about hybrid work and concurrently make an overall learning and development strategy more effective as well.

As part of its research, InSync conducted directed sampling of full-time workers (N=424) that attended work-related training at least quarterly across all industry sectors. The respondents were required to have attended an instructional delivery that included BOTH remote and in-person participants. The survey was designed in two parts—the first part of the instrument was designed to collect respondent observations and impressions of their instructional experience and the second part was designed to assess the individual learner's level of engagement during the instructional delivery.

The following are the observations and recommendations of an effective hybrid workforce learning and development program:

1. More than 76% of respondents noted that the instructional delivery appeared to be designed ONLY for either remote or in-person delivery, despite both types of

¹ Haan, K. (June 2023). Remote Work Statistics and Trends In 2024. *Forbes*. <https://www.forbes.com/advisor/business/remote-work-statistics>

² Tsipursky, G. (April 2023). Why Jamie Dimon's Resistance to Flexible Work Spells Trouble for JPMorgan. *Entrepreneur*. <https://www.entrepreneur.com/leadership/why-jamie-dimons-resistance-to-flexible-work-spells/449764>

³ Gallup (2023) Global Indicator—Hybrid Work. <https://www.gallup.com/401384/indicator-hybrid-work.aspx>

⁴ Braier, A., Datar, A., Eggers, W., Garrett, M., Smith, S. (2021, February 10). Designing adaptive workplaces. Deloitte. <https://www2.deloitte.com/us/en/insights/industry/public-sector/designing-for-adaptive-work-in-the-public-sector.html>

audiences (in-person and remote) being present in the same session. Learners noted the piecemeal exclusion or partial inclusion of the “other” audience from portions of the instructional experience, limitations in instructional delivery to one audience or the other, and concerns expressed by the instructional team as indicators that the program was really meant for only one type of audience.

2. Of those that noted that the instructional experience was designed only for one type of audience (remote or in-person), those that were in the “other” audience were far less likely to be engaged with the material. In fact, being the “other” type of learner was a significant predictor of overall learner engagement for all learners. Interestingly, the learners in the designed-for environment also demonstrated reduced engagement during their instructional experience.
3. Attrition rates were similarly affected—learners in the “other” audience were far more likely to attrite from BOTH elective and mandatory instructional deliveries. Moreover, the correlation between non-engagement and attrition was the best predictor in whether a learner attrited from the instructional delivery, followed closely by whether attendance in the instructional delivery was mandated to the learner.
4. Conversely, for those learners in well-designed hybrid instructional deliveries, there was no significant difference between the level of engagement for in-person or remote learners, but the overall level of engagement for those learners was significantly higher and attrition was significantly lower compared with those in poorly-designed hybrid instructional deliveries.

The respondent data provide some clear insights into the implications and possible opportunities that hybrid learning can provide to the workforce. It is clear, however, that a large majority of instructional practice reflects the inability to address the challenges of delivery to two “types” of audiences at the same time and the ambivalence about hybrid work (and learning) overall. The good news is that with the same data and concurrent research, InSync provides a clear path forward to address these issues and enhance organizational hybrid collaboration and culturization. In this report, we will further expand on the findings of the research and implications for learning and development stakeholders so that they can implement a more effective training strategy and produce beneficial hybrid organizational outcomes as well.



An Introduction to Hybrid Learning and Some Operational Definitions

What Hybrid Learning Is and What It's Not

Reason for the Research

Since 2018, remote work has increased in the US workforce fourfold. Today, one in every four labor hours delivered to the economy is delivered by a remote worker, and more than 99% of workers would prefer at least some work be remote.⁵ For their part, senior leadership in corporate America reportedly seem to have divergent views on remote work of any kind, with most settling on a middle ground “hybrid” solution combining both remote and in-office working, offering flexibility and maintaining a level of physical presence at the workplace—it seems like the balance is that sought by most of the workforce. Commentators have noted that any company that tries to force a staff to go fully in-person is likely to lose talent, and the converse is also true—a recent Gallup poll found that 60% of workers would leave a position if it was entirely remote.

Hybrid work appears to be here to stay, and it brings unique challenges to both senior leadership and the workforce in general. Among the identified concerns about hybrid work are the loss of the ability to collaborate (when remote) both within team and cross-functionally. Without all of the workforce in-office, leaders are concerned about the loss of effective culture in the office, particularly with new talent.⁶

In late 2021 as offices were opening strongly across the US, InSync began a line of research about the effects of, challenges with, and best approaches to instructional delivery to a hybrid audience. The ongoing research concluded a milestone of data collection, and the analysis has provided some insights on how learning and development implementation can be optimized to serve a hybrid workforce and concurrently address some of the notable concerns about the broader organizational effects of hybrid work.

Summary of the Study

The present study seeks to identify the learner effects, challenges, and effective instructional approaches within the hybrid learning environment. This study employed an exploratory sequential mixed-methods design. Qualitative data from six individuals engaged in industry learning and development of adults in professional settings and a comprehensive literature review was coupled with a comprehensive learner engagement instrument (measuring the latent learner engagement construct: Affective Learner Engagement, Cognitive Learner Engagement, and Situated Learner Engagement) to develop a comprehensive picture of the hybrid learning learner experience in the context of engagement and outcome.

Confirmatory Factor Analysis (CFA) reinforced the strong validity evidence developed to date for the learner engagement instrument (N=1,391) as part of the study, administered to

⁵ Gallup. (2023). Global Indicator—Hybrid Work. <https://www.gallup.com/401384/indicator-hybrid-work.aspx>

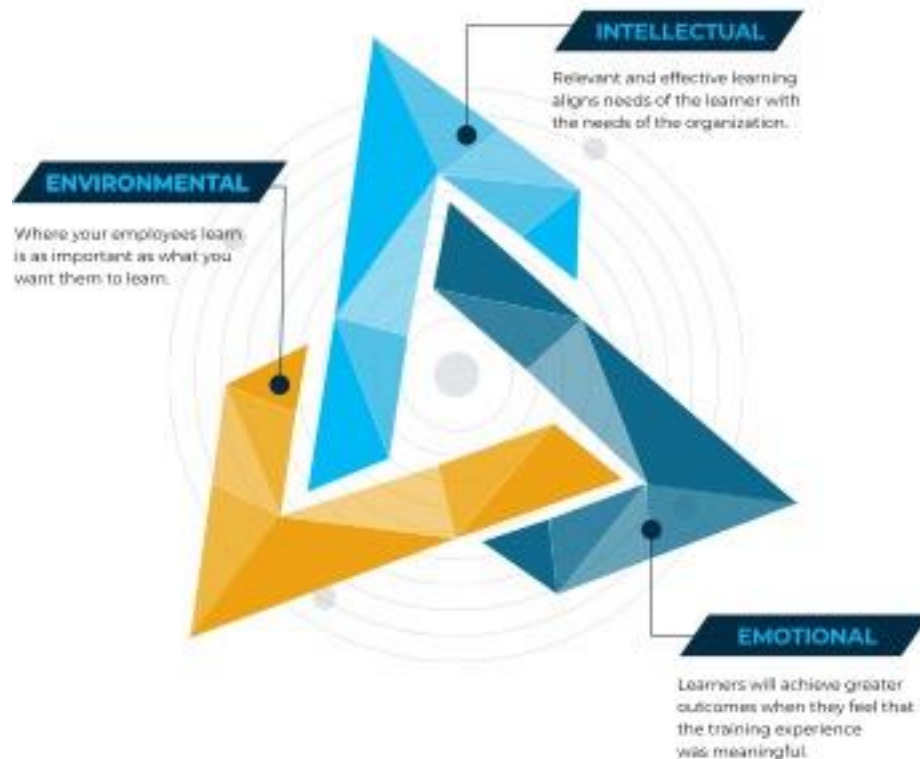
⁶ Gallup. (2023). Global Indicator - Hybrid Work. <https://www.gallup.com/401384/indicator-hybrid-work.aspx>

a directed sample of 424 participants. The present study also defined unique environmental and affective factors that can be addressed through specific instructional techniques within the hybrid learning environment to enhance learner outcome.

Operational Definitions

This report will use a variety of learning and development technical terms, many of which are commonly understood. However, some of the terms used in this report can have multiple meanings. To provide clarity and concise usage, the following operational definitions for this report are used:

1. Remote Learner – A remote learner is one attending the live instructional delivery via a variety of technology-based platforms to interact with the instructional team and peer learners.
2. In-Person Learner – An in-person learner is one attending the live instructional experience within a dedicated space (either in the workplace or at a third-party site) collocated with the instructor/facilitator.
3. Hybrid Instructional Delivery – A hybrid instructional delivery is a live session delivered to BOTH in-person and remote learners at the same time. The learning content treatment and delivery is the same for all learners.
4. Blended Instructional Delivery – As distinguished from a hybrid instructional delivery, a blended instructional delivery uses a variety of content treatments and delivery methods (live in-person, live remote, self-paced online, micro-learning, etc.).
5. Learner Engagement – Learner engagement is a latent construct within the learner that varies over time during an instructional experience along three dimensions—emotional, Intellectual, and environmental—and can be measured *in situ* and *post-hoc* through a variety of measures and instrumentation. A high degree of Learner Engagement is highly correlated with improved learner outcomes and enhanced retention. InSync has operationalized its research in learner engagement measures, techniques, and outcomes in the InQuire Engagement Framework™.



Designing for a Hybrid Instructional Experience

Addressing the Unique Environment That Is Hybrid Learning

A formal design of instruction is a cornerstone of quality and effectiveness for training. Design offers several advantages to the implementation of an instructional intervention for an organization—the instruction is generally tied to organizational objectives, the implementation is well documented, and learner experience is consistent in meaningful ways related to outcomes. Any analysis of learning must begin with the design and the intention of what the training is meant to achieve, both for the learner and for the organization.

Analysis of the data relating to the design and implementation of hybrid learning provides several key results:

1. Most training (76%) delivered to the hybrid learning audience is designed for only one part of the audience (remote or in-person) rather than for all learners.
2. When designed appropriately for the hybrid audience, learners are more likely to complete the training, value the training, and adopt the information presented/skills practiced.
3. Well-designed hybrid training provides hybrid interaction and collaboration skills as well as third party software tools that are useful elsewhere in the work of the learner.
4. Poorly designed hybrid learning often results in poor learner perceptions about the hybrid environment in general.

As part of the survey administered in this research, respondents (N=424) were asked for their perceptions about the design and delivery of the hybrid instructional experience. Most respondents indicated that their hybrid delivered instructional experience was not designed for the hybrid audience (N=321)—put another way, *more than three quarters of instructional deliveries were perceived as not addressing the entire learning audience.*

Another part of the survey discussed perceptions and relevance of the instructional experience as part of the engagement measures (more on that later in this report), but it is worth noting that failure to design specifically for a hybrid delivery results in a substantial reduction in perceived utility/relevance of the training. Similarly, qualitative responses indicate that of those learners in a well-designed hybrid experience (N=103), the interaction and collaboration skills they observed modeled by the instructional team and among each other in the hybrid environment activities were useful for other tasks. Several respondents specifically noted the use of new third-party tools used for instruction that could be used for hybrid team coordination and collaboration. Some common design elements that appeared in the qualitative data include

- Intentional design for the hybrid environment;
- Choosing instructional and assessment strategies that permit active participation by all learners;
- Designing active learning for the hybrid environment and promoting remote/in-person collaboration in small groups;
- Designing collaborative activities for all learners during the session, and providing collaboration opportunities modeling the same expectations and behaviors post-delivery;
- Designing debriefs and summary sessions where all learners can contribute based on their individual (in-person or remote) experiences; and
- Developing materials and resources accessible for all learners.

Lastly, the qualitative data from the survey suggest that adapting an existing single-environment instructional experience for the hybrid learning audience requires a re-design of those elements of the program that rely on non-common capabilities of the entire learner audience. Activities or interactions that exclude some portion of the audience produce uneven learner experiences and outcomes (see the section on learner attrition).

The hybrid learning environment is unique—just like all other learning environments—but it is fair to say that it is less well-understood than most other learning environments. In the hybrid learning environment, each sub-audience of learners (in-person, remote) has separate and unique capabilities for interaction. The challenge is to create an instructional experience that builds on the common elements between all members of the learning audience in the hybrid environment.

Learner Engagement in a Hybrid Environment

Learners Engage When They Are Provided the Opportunity

Within the context of hybrid learning, learner engagement offers an excellent measurement framework with which to evaluate the effectiveness of hybrid instructional delivery. By its nature, learner engagement is unique to each individual and their respective particularities (location, instructional needs, experience, interest, etc.). Learner engagement is also strongly correlated with enhanced learner outcomes and demonstrated improved instructional persistence in changing learner behaviors and performance.

Turning to hybrid instructional delivery, there are three noteworthy results that can be drawn from the learner engagement measures (positive or negative) in a hybrid instructional delivery:

1. Learner engagement in an instructional delivery that is not designed for a hybrid environment is significantly lower as compared to those instructional deliveries that were designed for the hybrid environment.
2. Regardless of the specific environment (in-person or remote) that a learner was in during the hybrid delivery, their engagement was negatively impacted when the instruction was not inclusive of all learners.
3. The use of learner engagement as a measure of instructional efficacy is appropriate for the hybrid environment.

To understand these results and their implications, it is appropriate to understand the underlying construct of learner engagement. In 2018, InSync completed research and development of an innovative cognitive model of learner engagement. This model has been operationalized as the Inquire Engagement Framework™. Within the framework, there are three latent factors of learner engagement:

Emotional Response: This dimension is a direct emotional (or visceral) reaction to the learning experience, membership in the learning experience, and sense of safety and willingness to participate in the context of learning.⁷ Affective reactions that might exemplify this aspect of learner engagement would include a sense of belongingness within the learning environment and among other participants; a positive sense toward other learners and/or any instructor; collaboration; shared experience; skill development and the sense of self-worth that comes from being more skilled (and worthy as a member of a community); and/or participation in a learning community.

Intellectual Response: The second dimension of the construct of learner engagement is the degree of intellectual challenge perceived and accepted by the learner in the learning experience. Intellectual engagement involves the learner in the subject

⁷ Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring cognitive and psychological engagement: Validation of the Student Engagement Instrument. *Journal of School Psychology, 44*(5), 427-445.

matter.⁸ This factor seeks to measure the degree to which the learner is challenged to advance mastery and learn from others (including both peers in the classroom and the instructor) as well as of any sense of accomplishment stemming from academic achievement. Such accomplishment often contributes to a sense of relevance and applicability of the subject matter to the goals of the learner. Activities that might reflect this aspect of learner engagement would include asking sophisticated questions, sense of self-worth that comes from achievement, and sense of alignment of subject matter with task and performance.⁹

Environmental Interaction/Response: The third dimension of the construct of interest is the degree to which the learner perceives the environment, its effect on them as learners, and how the environment changes during the instructional experience as beneficial. While current commentators have most recently adopted a behaviorist approach to measuring interaction, this factor is directed beyond simply measuring observable data to measuring the changes in the environment when something changes, e.g. when one participant states a controversial opinion, resulting in a heated debate. It is the evolution from simple back-and-forth to debate that is being measured here, not the simple expression of an opinion. Environmental engagement involves the learner in the change of the environment as it happens and seeks to measure the changes perceived by the learner as they occur. Such changes and the participation of the learner in them often contribute to a sense of contribution and belongingness.¹⁰ Activities that might reflect this aspect of learner engagement would include all observable activities of the learner, as well as the evolving sophistication of the discussion, dialogic response analysis in discussions, participating in polls, asking questions, sense of how the participant is being represented/advocated in the environment, and sense of alignment with the instructional outcome.

For those learners that attended an instructional experience that was not designed for the hybrid audience (N=321), a composite measure of engagement was significantly lower compared with that of those whose instructional delivery was designed properly for their environment ($X^2(1, N = 321) = 8.7, p < .001$). The respondent qualitative data suggests two principal causes for reduced learner engagement in this context:

1. Emotional Engagement - There was concern about other parts of the audience—specifically those learners not designed for (the “other” audience)—and how they were experiencing and contributing to the classroom experience. This is an important and nuanced point—even for in-person learners within a learning experience designed for in-person delivery, those learners were concerned about the remote learners and their contributions (or lack thereof) during the instructional experience to the point it negatively impacted their own engagement.
2. Environmental Engagement - There was also frustration with poor management of hybrid interaction. Data included frustration with “stepping over each other,” those in

⁸ Goff, M., & Ackerman, P. L. (1992). Personality-intelligence relations: Assessment of typical intellectual engagement. *Journal of Educational Psychology*, 84(4), 537.

⁹ Sogunro, O. A. (2015). Motivating factors for adult learners in higher education. *International Journal of Higher Education*, 4(1), 22-37.

¹⁰ Trowler, V. (2010). Student engagement literature review. *The Higher Education Academy*, 11(1), 1-15.

the “other” learning audience feeling disconnected or ignored, and the instructional team having a limited ability to facilitate meaningful interaction with the “other” audience.

In contrast, for instructional experiences perceived as designed for the hybrid audience (N=103), learner engagement was statistically indistinguishable from data from all learners and learning environments (N=1,391).

One of the most observable outcomes of learner engagement is the retention (or attrition) of a learner within an instructional delivery. When a participant “votes with their feet” by leaving the instructional delivery early, there are often a variety of reasons that might be cited.¹¹ When viewed from the context of the engagement framework, however, the myriad reasons reduce down to one issue—attrition is simply the last act of dis-engagement of a learner. Attrition is costly both for the individual and the organization, including several components:

- The direct financial loss of the cost of instructional design and delivery to that learner (lost labor, cost of instructional team, facilities, etc.);
- The organizational costs related to uneven training delivery, implementation, and outcomes (some people are acting with new information, while others are not); and
- The individual attitudinal and behavioral costs imposed by reinforcement of perceived challenges in remote/in-office interaction/collaboration.

In evaluating the relationship between composite engagement score and attrition, the results from linear regression modeling indicate that learners make the decision to attrite based on the level of (dis-)engagement they are experiencing, controlling for length of program and subject matter. As the level of engagement decreases, learners are less likely to be willing to continue in the instructional delivery. Respondent data in the present study indicates attrition was nearly twice as likely in programs that were not designed and delivered for the hybrid audience.

When considering the implications of these results, it is important to understand the “poisoning the pond” nature of learner engagement. Within the InSync Inquire Engagement Framework™, each of the factors (Emotional, Intellectual, and Environmental) strongly moderates the other two factors dynamically during the instructional experience (as represented by covariance of the factors within the response data). Learner engagement, simply put, requires the learner to emotionally engage with the experience, intellectually engage with the subject matter, and environmentally engage with peers, the instructional team, and the affordances of the learning environment (chat, polls, etc.). It seems complicated, but learners do it every day—the best way to think about this concept is, for example, if the person is intellectually engaged with the subject matter because of an underlying relevancy to their job, interest, etc., that learner is likely to develop positive emotional engagement (as they develop mastery) and will be more likely to interact with the environment (actively participate, contribute, etc.). As to implication, a composite learner

¹¹ Tyler-Smith, K. (2006). Early attrition among first time eLearners: A review of factors that contribute to drop-out, withdrawal and non-completion rates of adult learners undertaking eLearning programmes. *Journal of Online Learning and Teaching*, 2(2), 73-85.

engagement measure is strongly correlated with learner outcome/trajectory ($r(1867) = .78, p < .001$)—the more engaged the learner is in the instructional program, the better their performance. From the results, we can infer that failure to engage the learner through a failure to design and accommodate the needs of a hybrid learner audience will adversely affect learner outcomes and increase attrition.

Organizational Outcomes of Hybrid Learning

When We Learn in a Hybrid Environment, We Also Learn How to Work in a Hybrid Environment

In addition to the expected outcomes of any instructional program (specific learning objectives such as new declarative knowledge or development of a new skill), the qualitative data suggest that learners in successful hybrid instructional experiences emerge with some insights that can positively influence hybrid work at an organization. Two themes emerged from qualitative data related to hybrid work and interaction:

1. Successful hybrid instructional delivery models, techniques, and approaches that were viewed very positively by learners would promote adopting those same techniques and approaches for their own work context.
2. Successful hybrid delivery provides opportunities for early-in-career learners to interact with senior colleagues and ask meaningful questions in a safe environment.

Taken together, these two themes suggest that an effective hybrid implementation of training provides an approach to addressing two of the most-cited concerns around hybrid work—namely, that remote and hybrid workers find it difficult to effectively collaborate and that hybrid work impedes the ability to convey corporate culture. Well-designed and implemented hybrid learning provides the learner with the opportunity to refine their *understanding of what works and what doesn't within the learning environment* to achieve the outcome they want, and the knowledge and skills developed in the instructional experience are directly transferable to the real-world hybrid workplace. When learners learn in a hybrid environment, they also learn how to work in a hybrid environment.

While the relationship between hybrid learning and organizational hybrid work adoption was not part of the original research design, the data suggest that hybrid learning can serve a pivotal role in an organization implementing a robust and effective hybrid work approach and can be an effective tool in conveying culture and building interpersonal relationships for hybrid and remote workers with their in-office colleagues.

Diving Further into the Data

Additional Analysis and Insights

For those readers more interested in the data and specific findings, this section will briefly detail methodology, respondent demographics, and relevant descriptive statistics, along with supplemental post-hoc testing on the data and the insights they provide.

Data Sampling

Qualitative data was collected using respondent purposeful sampling (for interviews) and convenience sampled (as part of the survey). Quantitative convenience sampling was employed through an online data platform (Amazon Turk [anonymous] and social media prompting InSync's community of practice) to qualify respondents in alignment with the population of interest and desired screening criteria. For Amazon Turk-sourced respondents, small financial incentives¹² were offered to the respondents in return for the completion of a survey. All responses were obtained anonymously unless specifically waived by respondents seeking a published copy of this report. Data security and de-identification post-collection ensured all rights of the subjects were protected such that no one person's response could be identified, either through survey code markings or any other method.

Methodology—Qualitative Analysis

Qualitative data collection consisted of open interviews with industry practitioners and corporate executive stakeholders in learning and development, coupled with open text response data in the survey. The interview protocol was implemented to collect impressions, opinions, and perceptions as they relate to the experience of a typical hybrid learner,¹³ as well as relevant artifacts (policy documents, syllabi, learner notes, etc.) related to the hybrid instructional experience.

During analysis of the data, a situated cognition framework¹⁴ was used to develop the central concept and related concepts of a qualitative study, wherein the effectiveness of learning and pedagogical method is largely defined by the assessed outcome and the individual and his/her perception of the learning experience, rather than the environment or outcome alone.¹⁵ Basic interpretive methodology was selected to allow the definition and factors affecting hybrid learner engagement to emerge from the data collected. After initial coding, categories were axial coded along relational lines to develop and then refine themes that in turn were used to supplement the qualitative analysis of the survey data.

Historical Learner Engagement Data

Where appropriate for applicable statistical analysis, this research study drew on historical learner engagement data as a baseline against which to compare and contrast the data from hybrid learning experiences. InSync maintains a data set of more than 300K elements from 1,391 respondents (inclusive of this study) including data from other related research that includes performance data and other post-delivery data for some records.

Descriptive Statistics & Respondent Demographics

¹² InSync Training paid for the Amazon Turk service at the rate of \$1 U.S. dollars per participant, plus costs for the online platform. Amazon, not InSync, compensated participants who completed the survey, according to the Amazon's internal policy.

¹³ Seidman, I. (2013). *Interviewing as qualitative research: A guide researchers in education and the social sciences* (4th ed.). New York, NY: Teachers College Press.

¹⁴ Brown, J. S., Collins, A., & Duguid, P. (1989). *Situated cognition and the culture of learning*. 1989, 18(1), 32-42.

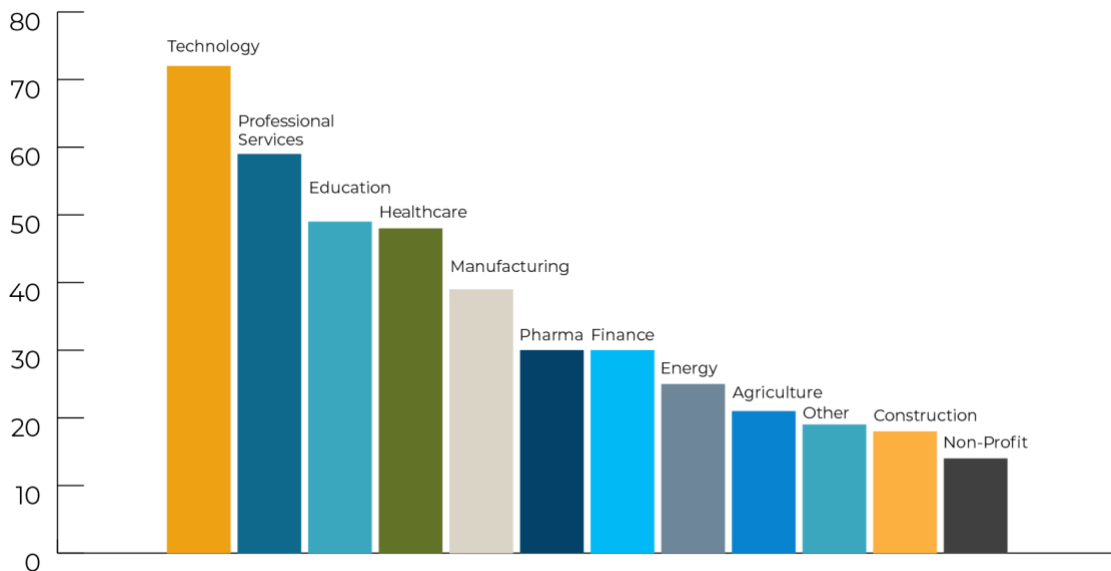
¹⁵ Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

Industry Sector

Respondents in the sample represented 17 separate and distinct industries that included 8 formally selected categories (see Figure 1). Response data for respondents selecting “Other” as an industry classification were reviewed, and 96 responses were re-coded where indicated using the U.S. Bureau of Labor Statistics taxonomy of industries and sub-classifications that corresponded to the industry classifications of the instrument. By way of comparison, the U.S. Bureau of Labor Statistics distinguishes 568 labor categories among 22 industries.¹⁶

Figure 1 *Industry Sector Distribution of Respondents*

Technology	72
Professional Services	59
Education	49
Healthcare	48
Manufacturing	39
Pharmaceutical	30
Finance	30
Energy	25
Agriculture	21
Other	19
Construction	18
Non-Profit	14

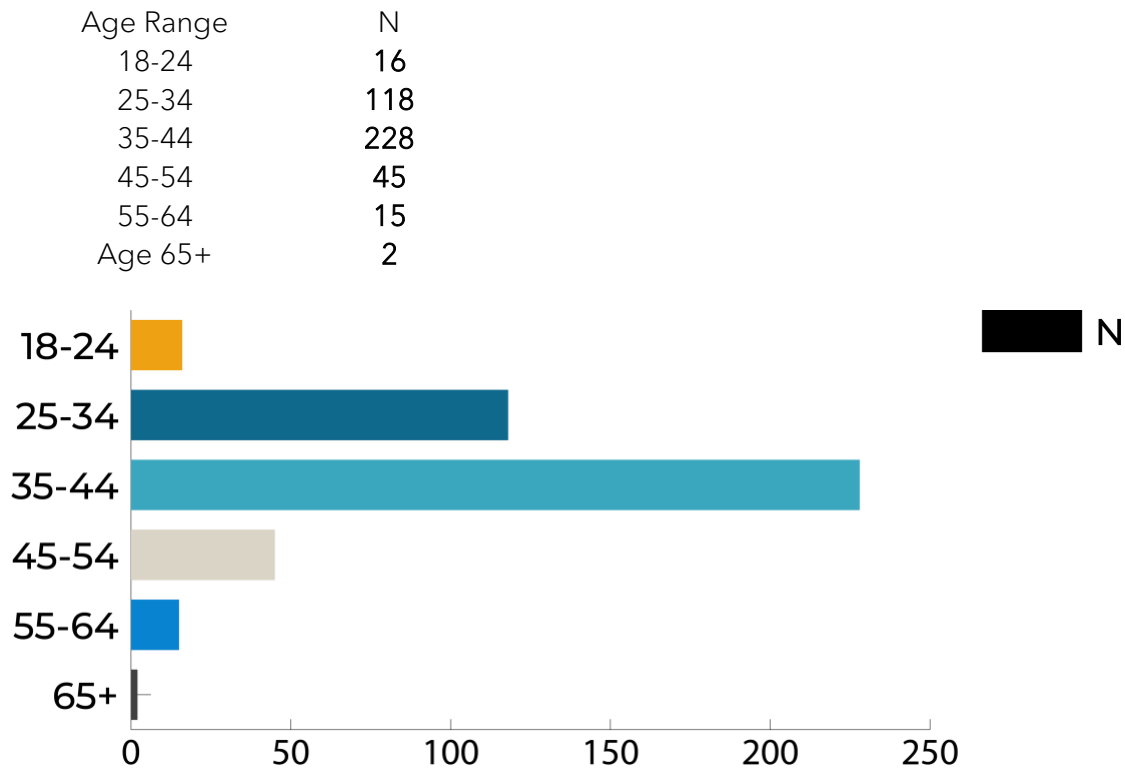


¹⁶Bureau of Labor Statistics. (2022). <https://www.bls.gov/bls/industry.htm>

Age

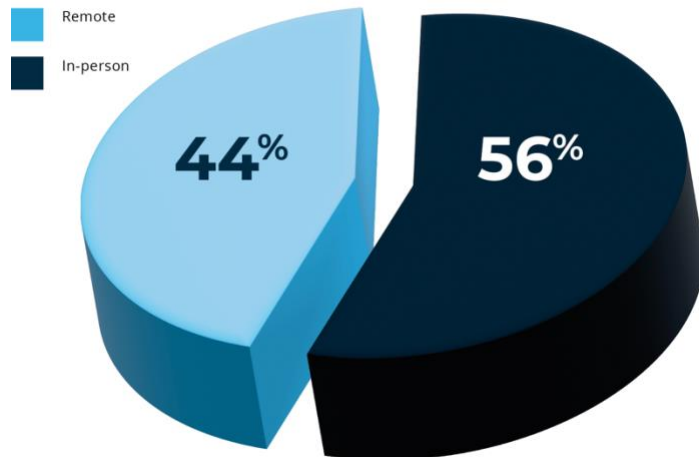
Respondent age distribution in the sample aligns with that of the general U.S. workforce. Median response age for the sample (38.3) corresponded to the U.S. median work workforce (41.8), supporting the assertion from Hamby & Taylor (2016) that the convenience sampling approach provides a sufficiently diverse data sample with respect to measured demographics. The age distribution demonstrated modest skew toward a younger population than the US workforce (see Figure 2).

Figure 2 Respondent Age Distribution



Hybrid Learner Type

Within the sample (N=424), 237 respondents had participated in a hybrid instructional delivery, compared with 187 that participated remotely.



Length of Instructional Experience

Within the sample, the mean instructional experience length was 2.87 hours, with a total range of one hour to one workday (7 hours) and a standard deviation of 1.75 hours (see Table 1). Hours were estimated by the grouping options provided in the instrument. Though varying extensively by industry, the type of industry sector provided no significant insight as a predictor of training length for any individual ($p = 0.983$), a result not surprising given the lack of sample size and power among twelve industry sectors (producing 11 degrees of freedom within the analysis).

Table 1 *Mean Instructional Experience Length by Industry Sector*

Industry	N	Mean	Std. Deviation
Agriculture	21	1.12	1.03
Construction	18	2.78	1.25
Education	49	2.63	1.30
Energy	25	1.55	1.15
Finance	30	2.74	1.63
Healthcare	48	2.68	1.17
Manufacturing	39	2.63	1.48
Non-Profit	14	2.21	1.37
Other	19	2.55	1.27
Pharmaceutical	30	2.75	1.37
Professional Services	59	2.66	1.31
Technology	72	2.49	1.55

Learner Engagement by Learner Type

Further analysis was conducted of the composite engagement score (CES) means by learner type (remote or in-person) in properly designed hybrid learning deliveries to assess where the differences in means were statistically significant (see Table 2) using a one-way ANOVA with a Bonferroni adjusted alpha of .0167 (accounting for three post-hoc analyses). The results of ANOVA indicated there was no significant difference in means for composite engagement score across hybrid learner type (remote, in-person) for sessions that were perceived as being designed for a hybrid learning environment.

Table 2 *One-way ANOVA for Testing Differences in Composite Engagement Score Means Across Learner Type*

Variable		Sum of Squares	df	Mean Square	F	p
CES	Between Groups	8.45	1	8.45	0.73	0.781
	Within Groups	104.31	101	1.03		
	Total	112.76	102			

Attrition of Learners

For those learners that reported not completing the instructional session (coded as binary ATTRITE), a logistic regression was used to assess the strength of the relationship between the decision to attrite and a composite engagement score, controlling for class length and subject matter.

The logistic regression model was statistically significant, $X^2 = 17.313$, $p < .001$. The model explained 71% (Nagelkerke R^2) of the variance in attrition/retention and correctly classified 87% of cases. The analysis found that the composite engagement score (CES) is a significant main effect in the decision of a learner to attrite or remain in the instructional program.

Engagement in Mandating Training

Lastly, additional ANOVA analysis was done to evaluate whether the mandatory nature of the instructional program was predictive of the engagement of the learner under the theoretical model, a relationship that has repeatedly been found to exist in our research. Mandatory training was (again) found to be a significant predictor of engagement under the theoretical model of the study (see Table 3).

Table 3 *Mandatory Attendance as a Predictor of Learner Engagement*

Variable		Sum of Squares	df	Mean Square	F	p
Emotional	Between Groups	23.43	1	23.42	23.05	<.001
	Within Groups	380.23	422	0.90		
	Total	403.66	423			

Intellectual	Between Groups	15.26	1	15.26	14.35	<.001
	Within Groups	355.58	422	0.84		
	Total	229.57	423			
Environmental	Between Groups	13.54	1	13.54	17.26	<0.001
	Within Groups	397.54	422	0.94		
	Total	293.47	423			

Limitations and Validity

In using directed (or purposeful) sampling for qualitative data collection, there is a potential to provide measures based on the particular affordances and perceptions of the learner within any given experience. The experts solicited for interviews were carefully selected based on their expertise in both situated cognition theory and hybrid learning experience or need. To maximize credibility of qualitative data, qualitative data was axially coded, member checked, and compared with the results from an independent researcher coding the same data.¹⁷

The instrument used for learner engagement measurement has been subjected to repeated Confirmatory Factor Analysis (CFA) for every study in which it has been used. The data sets collected are individually tested and evaluated for internal validity and consistency, and an aggregate data CFA is also performed. To date, the instrument continues to provide meaningful insights into the individual learner experience.

Construct validity conceptually is about whether an instrument actually represents what it claims to represent. In this study, construct validity was established based on a validation analysis conducted by a panel of experts in both academia and in the industry. The validity for internal structure of the learner engagement construct was statistically established through CFA across two independent online convenience samples (each N=300) in 2019 and has been consistently re-affirmed with each subsequent sample (total respondents = 1,391).¹⁸

For its part, online convenience sampling itself has been the subject of some research to identify any sampling biases and adverse respondent behaviors with mixed results,¹⁹ likely limiting generalizability and validity only to those in the qualified population of interest. As noted earlier, the evidence on the use of these sampling methods is mixed, but generally the

¹⁷ Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report*, 8(4), 597-606.

¹⁸ Hedges, L. V., & Olkin, I. (2014). *Statistical methods for meta-analysis*. New York, NY: Academic Press.

¹⁹ Chandler, J., Rosenzweig, C., Moss, A. J., Robinson, J., & Litman, L. (2019). Online panels in social science research: Expanding sampling methods beyond Mechanical Turk. *Behavior research methods*, 51, 2022-2038.

threat of data validity through satisficing and similar sources of data inaccuracy has been found to be no worse than traditional methods.²⁰

This data sample provided sufficient power to resolve a solution and assess model fit. Many of the items within the three subscales demonstrated moderate to high correlation that may reflect underrepresentation of the entirety of each of the factors. Due to this limitation, the results of this study (e.g., the survey) should be generalized with caution to other learner populations or situations beyond those conditions detailed in this and related studies performed by InSync.

Summary

Interviews, surveys, and broad demographic studies from multiple sources both in the US and globally suggest that some form of hybrid work will be the status quo for any work that does not explicitly require office presence. The current disparate policies and implementations company-to-company will (someday) subside, and a new “normal” labor model will emerge—one that almost certainly will include some form of hybrid work. Developing a skilled and evolving hybrid workforce requires expansive use of new instructional techniques and technologies to ensure all learners can develop and implement new skills, including those that happen to be remote on the day of training.

For their part, the learner in the hybrid workplace today will continue to be beset on all sides by market forces they have to contend with to remain competitive—the skills they possess have “a decreasing half-life,” the training environments used to develop new skills are inauthentic, the technologies used in delivery can be unreliable or unfamiliar, and implementations are often undertaken without any consideration of the needs, prior experience, or intentionalities of the learner. With the adoption of hybrid work, a new challenge has presented itself—attending training in a hybrid environment means that the learner in “the other audience” is often ascribed the role of passive observer rather than active participant. In such cases, it comes as no surprise that persistence and retention in such training implementations is poor, absent some organizational mandate to complete it (and the data suggest even then, they’re not happy about it and may attrite anyway).

The construct of learner engagement provides excellent insight and a meaningful framework to evaluate the effects of hybrid learning on both the learner and the organization. The research suggests that if hybrid learning is delivered effectively, the learner outcomes are similar to any other well-designed and implemented training delivery, and the organization benefits from both the instructional intervention and the development of hybrid work skills, including collaboration, use of third-party tools, and hybrid interaction and scheduling, that serve learners in all aspects of their work.

The recommendations drawn from this research provide a roadmap for hybrid workforce development that is effective and resource efficient. Drawing from this research and our extensive experience in hybrid delivery, InSync Training is ready to assist your learning and

²⁰ Hamby, T., & Taylor, W. (2016). Survey satisficing inflates reliability and validity measures: An experimental comparison of college and Amazon Mechanical Turk samples. *Educational and Psychological Measurement, 76*(6), 912-932.

development team in taking advantage of all the capabilities of the hybrid learning environment to enhance your workforce and the emerging hybrid working environment.

DISCOVER THE INSYNC ADVANTAGE



Harness the power of virtual learning with InSync Training. We don't just deliver hybrid virtual training-- we create immersive, engaging experiences designed to resonate with learners and drive genuine behavior change.

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Why settle for one-size-fits-all when you can have training that's tailor-made for your organization? Whether you're a small business or a large corporation, our services manage everything from course creation to program management to go-live delivery.

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