

The Analysis of Training Issues on Learning Engagement: The Case of Mongolia

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Abstract

Our research focuses on how to support and implement active learning methods used in learning activities. Effective learning activities vary from person to person, as individuals have different learning styles and preferences. However, we studied the methods that tend to be effective for many people.

Through our research work, in providing participants with the basic understanding and imagination of professional foundation, professional, and specialization courses, coaches supported the use of methods such as dialogue, learning from real examples, posing problems, solving problems, role playing, and encouraging participation rather than using traditional coaching methods.

Keywords: Training, Learning, Human Resource Management

1. Introduction

Human resource and learning development professional knows that even after doling out hundreds of thousands of monae by cash and transfer annually for professional training programs, any lecture or session that doesn't leave much room for interactivity loses its punch. The desire to increase learning effectiveness motivates organizations' to care about employee engagement during learning development activities.

Human resource and learning development professionals understand that investing significant resources, both in terms of time and money, into professional training programs is essential for the growth and development of employees. However, simply delivering lectures or sessions without much interactivity can diminish the effectiveness of these programs.

Interactive sessions capture participants' attention and keep them engaged throughout the training. When individuals actively participate in discussions, activities, or simulations, they are more likely to retain information and apply it in their roles.

Active learning promotes active learning, where participants are

involved in the learning process rather than passively receiving information. This hands-on approach allows individuals to explore concepts, ask questions, and receive immediate feedback, enhancing their understanding and skill acquisition.

Studies have shown that people remember information better when they are actively engaged in the learning process. By incorporating interactive elements such as group discussions, case studies, or role-playing exercises, trainers can help participants retain key concepts and skills more effectively [1].

Application sessions provide opportunities for participants to apply what they have learned in real-world scenarios. Through activities like problem-solving exercises or simulations, individuals can practice new skills and strategies, gaining confidence in their ability to apply them on the job.

Collaboration fosters collaboration and teamwork among participants. By working together to solve problems or complete tasks, individuals can learn from each other's experiences and perspectives, enhancing their overall learning outcomes [2].

The professional training programs is essential, it's equally important to ensure that these programs incorporate interactive elements to maximize their effectiveness. By promoting engagement, active learning, retention, application, and collaboration, interactive sessions can significantly enhance the impact of training initiatives on individual and organizational performance.

2. Conceptual Framework

Learning activities theory encompasses various principles and strategies designed to optimize the learning process. Cognitive theories of learning focus on understanding how mental processes such as thinking, memory, problem-solving, and attention influence learning. Several scholars have contributed significantly to the development of cognitive theories.

Albert Bandura's Social Learning Theory has indeed been highly influential in various fields, including education, psychology, and communication. The theory, developed in the 1960s, emphasizes the importance of observational learning, imitation, and modeling in the learning process and it has made an impact in the higher education sector.

We choosed few theories from cognitive traditional theories as below:

Albert Bandura is a Canadian-American psychologist who is best known for his Social Learning Theory, which has had a significant impact on the field of psychology.

We detailed explanation of Bandura's contributions in our study. There are two main concepts as a Social Learning Theory, Observational Learning and Self-Efficacy.

The Social Learning Theory posits that people learn not only through direct experience but also through observational learning, where individuals observe and imitate the behaviors of others. This process is often referred to as modeling or vicarious learning. Bandura's Bobo Doll Experiment (1961) is a classic example illustrating the principles of observational learning.

Observational Learning highlighted the importance of models in the learning process. Models can be individuals in the immediate environment (such as parents, peers, or teachers) or symbolic models portrayed in the media. The observed behaviors can be imitated if the observer perceives the model as competent, attractive, and rewarded for their actions .

A significant aspect of Bandura's work is the concept of Self-Efficacy, introduced in the 1970s. Self-efficacy refers to an individual's belief in their own capability to perform a specific task or achieve a particular goal. Bandura argued that self-efficacy influences motivation, learning, and performance. Individuals with high self-efficacy are more likely to set challenging goals, persevere in the face of difficulties, and recover quickly from setbacks [3].

The ongoing development and application of Bandura's theory continue to shape our understanding of learning and behavior in diverse contexts. Nextly, David Ausubel's theory of meaningful learning has been particularly influential in the field of higher education, where educators aim to foster deep understanding and retention of complex subject matter. Ausubel's ideas have been applied in various ways to enhance teaching and learning at the college and university levels. It explores the role of prior knowledge and the organization of information in the learning process. While not specifically focused on higher education, the principles discussed are applicable to various educational settings.

David Ausubel delves into the psychology of meaningful learning. While not exclusive to higher education, it provides insights into the cognitive processes involved in learning and the role of prior knowledge. Curriculum Design is educators use Ausubel's ideas to design curricula that build on participants' prior knowledge.

Courses are structured to help participants connect new information to what they already know, facilitating meaningful learning. Curriculum design refers to the process of planning and organizing educational experiences for participants. In this context, educators often draw upon various theories and models to inform their curriculum development [4].

Instructional Strategies are professors often incorporate advance organizers into their lectures and materials. These organizers serve as frameworks for participants to grasp the structure and significance of upcoming content, promoting better understanding. In the realm of higher education, instructional strategies play a crucial role in shaping the learning experience for participants. Professors often employ various techniques to enhance comprehension and engagement, and one prominent strategy influenced by David Ausubel's theories is the use of advance organizers.

Problem-Based Learning emphasis on meaningful learning aligns with pedagogical approaches like problem-based learning, where participants work on real-world problems. This encourages the application of existing knowledge to solve complex issues, reinforcing meaningful learning. Problem-Based Learning (PBL) is an educational approach that aligns well with the emphasis on meaningful learning, particularly because it focuses on the application of knowledge to real-world problems. PBL often begins with the presentation of a real-world problem or scenario [5].

This immediately contextualizes the learning experience, making it relevant and meaningful to participants. The presented problem serves as a trigger for the acquisition of new knowledge and skills. PBL naturally involves the activation of participants' prior knowledge. As they encounter a complex problem, they draw upon what they already know to make sense of the situation.

PBL typically involves collaborative learning, where participants work in small groups to analyze and solve the given problem.

This collaborative process allows for the sharing of diverse perspectives and existing knowledge among group members. PBL promotes the development of higher-order thinking skills, such as critical thinking, problem-solving, and decision-making. Participants are not just memorizing facts but are actively engaged in analyzing, synthesizing, and applying their knowledge to solve complex, authentic problems. PBL is inherently inquiry-based, with participants actively seeking information and resources to understand and solve the problem at hand. This process of inquiry encourages a deeper exploration of the subject matter, contributing to the meaningful construction of knowledge [6].

Active Learning Techniques, Ausubel's theory supports the use of active learning strategies, such as discussions, group activities, and case studies. These methods engage participants and encourage them to relate new information to their existing knowledge, fostering deeper understanding. Active learning is an instructional approach that engages participants in the learning process through activities and participation, moving beyond traditional lecture-based methods [7].

Active learning spaces are physical environments designed to facilitate interactive and collaborative learning. These spaces often feature flexible seating arrangements, technology integration, and other elements that encourage student engagement. By recognizing the importance of prior knowledge and incorporating advance organizers, higher education institutions aim to create learning environments that facilitate the meaningful integration of new information. This approach contributes to the development of critical thinking skills and long-term retention of knowledge, key goals in the higher education sector.

3. Research Results and Processing

The results 439 public servants who worked public sector participated short time learning process. In order to find out

what factors are needed by participants during active learning, this research is detailed in the research design by providing the opportunity to evaluate the variables without overlapping the questions expressing the latent variables of each variable. In the development of the research, each question, which is a hidden variable, is shown in a table.

For the participants of the research, it is believed that the fact that the comparison of gender and course categories is not important, and most importantly, the quality assessment given to each variable is important, which made the research real.

Cronbach's alpha is a measure of internal consistency reliability, often used in the context of psychometrics and reliability analysis for surveys or tests. The value of Cronbach's alpha ranges from 0 to 1, with higher values indicating greater internal consistency. In our study, the Cronbach's alpha values range from 0.791 to 0.887. Overall, these values suggest a good to very good level of internal consistency reliability in your data. It indicates that the items in your measure are consistent in measuring the same underlying construct or trait [8].

In our study, the Rho_A values range from 0.815 to 0.898. These values generally suggest a good to excellent level of internal consistency reliability in your data. Higher values are indicative of a stronger and more reliable relationship among the items in your measure.

Composite reliability, like Cronbach's alpha and Rho_A, is a measure of internal consistency reliability used in the context of psychometrics and scale development. It assesses the extent to which the observed variables (items) in a scale are reliable indicators of an underlying latent construct. In our study, the composite reliability values range from 0.847 to 0.907.

No	Variables	Cronbach's alpha	Rho_A	Composite reliability	Average Variance
1	Attitudes of orientation activities	0.858	0.890	0.890	0.576
2	Skills for field trip activities	0.791	0.815	0.847	0.483
3	Environment learning activities	0.841	0.892	0.881	0.562
4	Engagement for learning activities	0.887	0.898	0.907	0.497

Table 1. The results of construct reliability and validity

These values generally suggest a good to excellent level of internal consistency reliability in your data. It indicates that the observed variables in your scale are reliable indicators of the latent construct our measuring (table 2).

No	Variables	Standard deviation	T statistics	P value	Results
1	Attitudes of orientation activities->Engagement for learning activities	0.130	1.050	0.294	Non supported
2	Skills for field trip activities->Engagement for learning activities	0.123	0.267	0.790	Non supported

3	Classroom learning activities->Engagement for learning activities	0.108	5.314	0.000	Supported
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Table 2. The results of construct reliability and validity

Standard deviation is a measure of the amount of variation or dispersion in a set of values. In other words, it quantifies the extent to which individual numbers in a data set differ from the mean (average) of the set. A smaller standard deviation indicates that the values tend to be close to the mean, while a larger standard deviation indicates that the values are spread out over a wider range [9]. Here's a general interpretation standard deviation in our study as below:

- 0.108: This set has the smallest standard deviation among the three, indicating that the values are relatively close to the mean.
- 0.123: This set has a slightly larger standard deviation compared to the first one, suggesting a bit more variability in the data.
- 0.130: This set has the largest standard deviation among the three, indicating the most variability in the data.

The T-statistic is a measure used in hypothesis testing to determine if the means of two groups are significantly different from each other. It's calculated by taking the difference between the sample mean and the hypothesized population mean and dividing that by the standard error of the mean [10].

1.050: This t-statistic indicates the difference between the sample mean and the population mean, relative to the standard error of the mean. The exact interpretation would depend on the context of the hypothesis test and the critical value associated with the desired level of significance. A t-statistic of 1.050 may or may not be considered statistically significant depending on factors such as the sample size and the chosen level of significance.

0.267: Similarly, this t-statistic represents the difference between the sample mean and the population mean, relative to the standard error. A t-statistic close to zero suggests that the sample mean is not significantly different from the population mean.

5.314: This t-statistic is considerably larger than the previous two. In hypothesis testing, a larger absolute value of the t-statistic is often associated with a greater likelihood of rejecting the null hypothesis. A t-statistic of 5.314 is more likely to be statistically significant, indicating a stronger evidence against the null hypothesis.

The P-value is a statistical measure that helps you determine the significance of your results in hypothesis testing. It represents the probability of obtaining results as extreme as, or more extreme than, the observed results under the assumption that the null hypothesis is true. Here's how to interpret the p-values in our study as below:

0.294: This p-value is relatively high (greater than 0.05, commonly

used as a threshold). A p-value of 0.294 suggests that, if the null hypothesis were true (meaning there is no effect or no difference), the probability of observing the data you have or more extreme data is 29.4%. In most cases, with a p-value greater than 0.05, you wouldn't have enough evidence to reject the null hypothesis at a 5% significance level.

0.790: This p-value is even higher. With a p-value of 0.790, you would have even less evidence to reject the null hypothesis. The data you observed is not considered statistically significant, and you would typically fail to reject the null hypothesis.

0.000: A p-value of 0.000 (or less than 0.001, often reported as 0.000) indicates very strong evidence against the null hypothesis. In practice, it's rare to see an exactly zero p-value, and it often means that the observed data is highly inconsistent with the null hypothesis. In most cases, a p-value less than 0.05 is considered statistically significant, and you would likely reject the null hypothesis.

4. Limitations of the Study

Regarding the research work, the following parameters are considered as the limited aspects of the research work. It includes:

1. The number of participants in the baseline survey was significantly lower than in the final survey.
2. Participants of studying in short time training were included in our study.
3. It was not possible to include multiple factors as hypotheses in the model to fully represent the learning process.

5. Recommendations from the Study

The following recommendations were made from the results of the research. It includes:

- Practice reinforcing knowledge in a way that all participants can understand when explaining the situation during a disaster
- To ensure the equality of team distribution, the number of participants assigned to one team should be decided by polling participants working in teams.
- When preparing to work in a disaster situation, provide each team with all the documents and documented information necessary for the tasks assigned to them.
- When creating an environment for learning games, pay attention to the distribution of classrooms, giving teams the opportunity to share knowledge and exchange experiences rather than competing teams.
- Give good instructions when creating an environment for field trips and training games on the training ground
- Provide complete equipment for training matches and provide necessary equipment to each team

- In order to make the teaching activities interesting for the teachers and for the participation of the participants, teaching by guest professors,
- It is considered appropriate for teachers to be mentors outside of school hours, to pay attention to the needs of participants, and to keep the time of independent work productive.

6. Conclusion

In summary, the composite reliability values ranging from 0.847 to 0.907 reflect a robust level of internal consistency reliability in the dataset. These results indicate that the observed variables within the scale consistently and reliably measure the latent construct under consideration. The t-statistic values provide insights into the significance of differences between sample and population means.

The T-statistic of 1.050's significance hinges on the context and critical value, influenced by factors like sample size and chosen significance level. Conversely, a t-statistic of 0.267, being close to zero, suggests little difference between sample and population means, while the substantially larger t-statistic of 5.314 indicates stronger evidence against the null hypothesis, making it more likely to be statistically significant in hypothesis testing.

Finally, the p-values of 0.294 and 0.790 suggest that, under the assumption of the null hypothesis, the observed data is not statistically significant at conventional significance levels (e.g., 0.05). On the contrary, a p-value of 0.000 indicates strong evidence against the null hypothesis, signaling a highly significant result and supporting the rejection of the null hypothesis in favor of the alternative hypothesis.

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	Mean, STDEV, T-Values, P-Values	Confidence Intervals	Confidence Intervals Bias Corrected	Samples					
					Original Sampl...	Sample Mean (...)	Standard Devia...	T Statistics (O /...	P Values
Attitudes of orientation activities -> Engagement for learning activities					0.136	0.165	0.130	1.050	0.294
Classroom learning activities -> Engagement for learning activities					0.575	0.558	0.108	5.314	0.000
Skills for field trip activities -> Engagement for learning activities					0.033	0.058	0.123	0.267	0.790

Construct Reliability and Validity

Matrix	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
	Cronbach's Al...	rho_A	Composite R...	Average Varian...
Attitudes of orientation activities	0.858	0.890	0.890	0.576
Classroom learning activities	0.841	0.892	0.881	0.562
Engagement for learning activities	0.887	0.898	0.907	0.497
Skills for feld trip activities	0.791	0.815	0.847	0.483

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