Using Blended Learning to Deliver Ergonomics Training

Humantech's Position

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INTRODUCTION

Effective ergonomic improvement processes deploy people with specific roles in an organization to systematically assess, design, improve, and reassess the workplace. However, most people do not have the specific knowledge, nor the skills, to fulfill their role. Consequently, providing them with training in the application of risk assessment and design tools/methods is a core element of a successful ergonomics process. Several training methods can be used to develop these skills. One of these is blended learning.

Humantech transfers ergonomics knowledge and skills using a blended learning approach, as opposed to traditional classroom style training. In our experience, using a blend of online, on-demand learning and hands-on application results in more effective and efficient development of skills and knowledge, and provides a method to sustain participants' knowledge over time.

Humantech's position is that a blended approach, based on the principles of adult learning and the "flipped classroom" model, provides the most effective means to deliver training in ergonomics.

BLENDED LEARNING

Blended learning is a learner-centered method in which the content and instruction is delivered in a mix of two ways: online and hands-on.

Well-designed online training content allows each student to control the place, time, path, and pace of his or her learning while delivering the content consistently. Today's computer technology allows training content to be updated, delivered, and tracked effectively and efficiently across multiple locations, geographies, and in different languages. This training is not driven by the instructor, but rather "pulled" by students as they work through the process of learning concepts and information. The training is always available in cases when a refresher may be needed, or if turnover in a position requires another individual to fill a role. This self-paced learning aligns with two principles of adult learning: learn what they are internally motivated to learn, and learn informally.

Following online training, hands-on application of learned information or skills enables participants to apply the concepts, information, tools, and methods in real workplace situations. Humantech calls this delivery the "Do" Workshop, in which a student completes risk assessments, applies ergonomic design criteria, enters information in ergonomics assessment software, and makes workplace changes. The workshop allows the instructor to evaluate how each student applies learned information; provide coaching, clarification and feedback; ensure learning verification; and address participants' questions. Feedback and coaching further strengthen participant confidence in their ability to perform. Hands-on application aligns with principles of adult learning: learn by doing, affected by experience, problem-based, and learning what is practical.

THE FLIPPED CLASSROOM

This is a form of blended learning that "flips" the order of traditional classroom training. In the flipped classroom, the participant first learns principles and information independently (the homework), and then works with the instructor to apply them (the classroom).

Humantech provides instruction using the flipped classroom concept by first providing online training modules through The Humantech System® and Ergopoint® software applications. This virtual training in principles and concepts is followed by the Do Workshop, where students apply what they have learned to find and fix poor ergonomic conditions in the workplace.

ADULT LEARNING

In the workplace, ergonomics training must be designed to align with the principles of adult learning, as employees are mature adults. Adults learn differently than children do. The principles of adult learning have been described by many organizations. The Canadian Literacy and Learning Network defines the seven key principles of adult learning:

1. Adults cannot be made to learn. They will only learn when they are internally motivated to do so.
2. Adults will only learn what they feel they need to learn. In other words, they are practical.
3. Adults learn by doing. Active participation is especially important to adult learners in comparison to children.
4. Adult learning is problem-based and these problems must be realistic. Adult learners like finding solutions to problems.
5. Adult learning is affected by the experience each adult brings.
6. Adults learn best informally. Adults learn what they feel they need to know, whereas children learn from a curriculum.
7. Children want guidance. Adults want information that will help them improve their situation or that of their children.

Blended learning for ergonomics, when applied to the workplace, includes all of these principles.

OPPOSING POSITIONS

One challenge with delivering blended learning and the flipped classroom is access to technology. Since both require computers to deliver online training, this presents a challenge for organizations that do not have computers, access to computers, or adequate connectivity or bandwidth.

Another challenge to blended learning is making time available for employees to step away from their jobs to complete online training modules. In our experience, online, self-paced training is a more efficient use of time than classroom training. Typically, completion of a training module by an individual takes less time than in a classroom, and yields better retention.

In addition to time constraints, some employers and employees state that they are not used to or comfortable using computers. This is less of a challenge today, but there are still those in the workforce who resist. We have found that online training programs that are designed for ease of use and navigation can reduce the learning curve and improve use. Designing online training programs to be more interactive also helps with the transition from instructor-led training.

Finally, there are still organizations that, hesitant to deviate from what is familiar, are resistant to changing from classroom training to online or virtual training. However, once employees and managers experience blended learning, they tend to prefer it over traditional classroom training.

CONCLUSION

Providing people with instructions and tools to help them fulfill their role in a company ergonomics process is essential for success. This is accomplished through training. The topics and learning objectives for each training class are based on the role and responsibility of each person.

The format of the training (how it is delivered) must be designed to fit the intended audience, and it must be delivered in an effective, efficient, and consistent way. To achieve this, Humantech's first choice is to provide online skills and awareness training blended with hands-on workshops.

ENDORSEMENT

This position statement was accepted by Humantech's Senior Leadership on May 25th, 2016.

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