Abstract

With the implementation of Common Core State Standards (CCSS), K-12 teachers, counselors, and administrators will be held accountable for meeting the explicitly defined standards of college and career readiness for every high school graduate. An equivalent and reciprocal challenge is also placed upon universities to prepare future education professionals to successfully meet the expectations for CCSS downstream outcomes. This will require significant changes to higher education processes to ensure rigorous teacher preparation which includes not only best practices in pedagogy, but also full understanding of the standards set forth by the CCSS. However, opportunities for developing in pedagogy and CCSS do not commonly exist. In an attempt to improve pedagogical rigor of new faculty members, the Network for Instructional Support and Enhancement (NISE) Program at the University of Central Missouri was initiated in the fall semester of 2012. Comprised of an orientation and mentoring process, this study provides an evaluation of the programs strengths, deficiencies and specific suggestions for enhancing the program. The research is limited because it was conducted at the mid-point of the pilot delivery of the complete program. Qualitative analysis was conducted on data collected from university senior leaders, NISE Program committee members and new faculty about their perceptions of the program’s delivery and impact.

Keywords: common core state standards, faculty development, faculty mentoring, new faculty orientation, pedagogical skills, teaching effectiveness
Introduction

The completion of a terminal degree does not equate to pedagogical knowledge. Formal mentoring programs of varying models have become a potential solution to bridge the gap between subject-matter expert and instructor. Mentoring is a best practice that has been proven to develop the skills of teachers, resulting in increased student learning. This ultimately improves faculty retention and translates to career satisfaction (Brown, 2003; Lumpkin, 2011). In an effort to engage new faculty and improve student learning, the University of Central Missouri (UCM) has developed the Network for Instructional Support and Enhancement (NISE) Program as an institutional-level orientation and mentoring process.

Multiple approaches have been used to assist faculty transition into new positions throughout the world. Mentoring circles, collaborative mentoring, peer-mentoring, intra- and inter-departmental, informal mentoring are examples of mentoring models, aiding instructors with vocational abilities (Bryant-Shanklin & Brumage, 2011; Lumpkin, 2003; Smailes & Gannon-Leary, 2011). The field of study in mentoring is rich; however, a single method has not shown itself to be effective for all subjects. Rather than consisting of merely a checklist, mentoring is about developing relationships. The NISE program at UCM takes a multifaceted approach to orientation and mentoring in an attempt to create and foster a relationship connection. Additionally, the NISE program provides the platform for university faculty to learn about CCSS and model the pedagogical skills across all disciplines.

Purpose of Program Evaluation

The purpose of this program evaluation was to evaluate the overall effectiveness of the NISE program for the stakeholders and faculty at UCM. Because the NISE program is less than one year old, program effectiveness was measured by feedback from faculty in regard to the program and translation of pedagogical skills from mentoring sessions to the classroom.

Description of the Program Evaluated

The NISE program was conceived by the academic deans to enhance student engagement and learning with the desired outcome to be increased student retention and faculty satisfaction. The overarching concerns for student learning and retention were classroom pedagogy; specifically, the lack of instruction provided to new faculty with respect to the art of teaching. Additionally, there was a desire to provide a more robust orientation to incoming faculty.

The NISE program addresses the concerns of the academic deans in two ways. The orientation program was completely reworked to have a focus on teaching skills, classroom management and assessment. In the pilot delivery, new faculty members were provided with teaching techniques that were modeled throughout the 3-day orientation program. Upon completion of orientation new faculty members were encouraged to participate in the second phase of the NISE program: mentoring. Mentoring was completely focused on pedagogical skills and classroom management. Each academic dean selected a faculty member to work on the NISE committee. The four committee members (along with others from the UCM campus), conducted the orientation and have been made available to the new faculty for mentorship.

The primary program coordinator for the NISE committee assumed the role of mentor to all new faculty with respect to classroom management and assessment. Classroom management and assessment mentoring was non-evaluative and conducted in three separate sessions. The coordinator worked with a given faculty member to determine the area to be observed in a
Common Core State Standards | 29

pre-assessment session. Upon completion of the pre-assessment the coordinator observed the new faculty member in the classroom and provided a post-assessment following the observation. Besides the mentors available through the NISE program, the academic deans stressed the need to continue with department level mentors for support in other career development areas, such as the promotion and tenure process.

**Research Questions**

The research questions addressed four specific questions:

1. What perceptions do new faculty members have about the NISE program regarding pedagogy/andragogy?
2. What are the factors that support or limit effectiveness of the NISE program?
3. What are the expectations of senior leadership for the NISE program?
4. What are the perceptions of new faculty about the mentoring experience?

**Review of Related Literature**

Given the purpose and structure of the UCM NISE Program, a range of relevant literature was useful for the program evaluation research process. Orientation of new faculty members is a standard practice for introduction to an institution’s culture, rules and operating practices. Beyond technical orientation, UCM has identified a need for pedagogical training.

**Pedagogy**

The pedagogical competence of new faculty remains a significant concern in institutions of higher learning. Minter (2009) describes university teaching as placing the development of minds in the hands of novice teachers for whom certification is not required. This concern for teacher competency is not new. Richlin (1995) stated “the college teacher is the only high-level professional who enters upon a career with neither the prerequisite trail of competence nor experience in the use of tools of [the] profession” (p. 258). This lack of experience is primarily due to the emphasis placed on research within doctoral programs, as opposed to pedagogical practice. Balkin and Mellow (2012), Berschback (2010), Jones (2008), and Madhavaran and Laverie (2010) highlighted the absence of teaching within doctoral programs; thus, creating a need for the hiring institutions to fill this “void” (Madhavaram & Laverie, 2010).

Collins and Pratt (2011) articulated five perspectives on teaching (transmission, apprenticeship, developmental, nurturing, and social reform) as captured in the Teaching Perspectives Inventory (TPI), a self-scoring inventory used to assess the value of a pedagogical approach, as well as defining the relationship between an instructor’s beliefs about teaching, intentions held, and resulting actions taken in the classroom. The results of their research demonstrate that there are legitimate variations of teaching excellence, and that a process of self-reflection (as explored through the TPI), articulation of teaching philosophy, and further conversations about teaching, can combine to help faculty members to determine their own style and to refine it based on the context of the needs of their students.

**Orientation**

A variety of entry pathways into higher education exist, from “informal and casual” to “assigned and explicit.” Ideally, the orientation program should be spread out across several weeks, with application exercises along the way (Cullen & Harris, 2008). There is clearly a tangible need for teacher instruction or training in pedagogical practice. Successful new faculty
orientation programs incorporate new faculty members' needs for safety, instructional competence, progression to tenure, and social enculturation. Faculty members look for “communities where collaboration is respected and encouraged, where friendships develop between colleagues within and across departments” (Rice, Sorcelinelli, & Austin, 2000, p. 13).

By most accounts, new teachers need three or four years to achieve competence, and several more to reach proficiency (Feiman-Nemser, 2003). The development of competence begins with the orientation experience. “[W]e must treat the first years of teaching as a phase in learning to teach and surround new teachers with a professional culture that supports teacher learning” (p. 25). Providing a high-quality orientation program increases the probability that new teachers will have positive, early teaching experiences (Feiman-Nemser, 2003).

Mentoring

In the realm of higher education, mentoring has proven to be a successful method of professional development. Research by Hargreaves and Fullan (2000), and Lumpkin (2011), suggests that such methods help teachers to gain a deeper appreciation for relationship development. This translates into a more trusting and effective partnership, which ultimately produces quality mentoring. According to Lumpkin (2011), “mentoring is a complex, multidimensional, idiosyncratic, and contextualized process that depends on the academic unit’s culture, the type of institution, and the expectations of those involved” (p. 358). A deeper look into the literature reveals a multitude of benefits from mentoring programs.

Faculty Development

Faculty orientation and development remain a priority at educational institutions. Adequate planning of the orientation program, with proper follow-up, is critical for its success. Higher education administrators should reflect on how they can support work-life balance for their faculty in order to ensure that faculty members grow professionally in their field of study, as well as in educational pedagogy (Good, Greene, O’Connor & Zhang, 2011).

Faculty members (both new and experienced) need continuing education and dedicated time to become skilled instructors. Non-threatening mentoring and peer evaluations can be helpful in achieving this by providing feedback that helps instructors improve without adding additional time demands on them (Ackerman, Gross & Vigneron, 2009; Huston & Weaver, 2008)

Assessment

While non-threatening mentorship provides for relational development, assessment of the effectiveness of each individual’s pedagogical approach in the classroom is an important factor leading to success. Yet, assessment of effectiveness in the classroom is traditionally limited to student survey data; however, growing trends in practice demonstrate that assessment can be enhanced by peer-evaluation and/or departmental review (Ackerman, Gross & Vigneron, 2009; DeZure, 1999).

Assessment of adult learning-focused workshops is frequently framed within Kirkpatrick’s (2006) four-level model of evaluation: Level 1 – participant satisfaction; Level 2 – participant acquisition of knowledge, skills or attitudes as a result of the experience; Level 3 – participant application of what was learned; and, Level 4 – outcomes related to participant application of what was learned (i.e., higher level outcomes or “return on expectations”) (Kirkpatrick, 2006; Kirkpatrick & Kirkpatrick, 2009; Steensma & Groeneveld, 2010).
As Kirkpatrick and Kirkpatrick (2009) position the rationale for higher outcome levels, “Many learning leaders still try to demonstrate their value to the business by using attendance Level 1 reaction data and Level 2 testing scores” (p. 23). Not only is training an expensive endeavor, it also requires a generous time commitment. Therefore, evaluation should be used to carefully determine the effectiveness of the program and to decide whether the program should be improved, re-engineered, or discontinued altogether (Steensma & Groeneveld, 2010).

Various methods are used to assess the quality of faculty teaching, with the end-of-course student survey used most commonly and consistently. Other methods include self-assessment, peer evaluation (based on observation), departmental evaluation (typically from a department chair), and subsequent student success (in future classes).

**Evaluation Approach and Methods**

Patton’s (2008) perspective on a “utilization focused evaluation” methodology was used by the research team to conduct the program evaluation. After discussion with stakeholders it was determined that the desired outcome of the NISE program should be student retention. The research team used qualitative methods to evaluate the NISE program, with this approach providing the necessary framework for analyzing the data (including attitudes and program outcomes), gathered to answer the research questions. The tools used were multiple observations, personal interviews, focus groups and a survey. The subjects participating in this study included: NISE committee members, academic deans, and new faculty.

The research team received UCM’s Institutional Review Board (IRB) approval for this human subjects study in order to proceed with the evaluation process. The interview, survey and focus group questions addressed the four research questions. The survey was disseminated to 38 new faculty members who did not participate in the focus groups and 15 were completed. The return rate percentage was high enough for the research team to agree that the sampling of convenience would give a wide enough range of reflection about the entire NISE program. The survey was sent electronically for rapid response, and ease of collection and interpretation.

The questions for the deans were created and designed to gather data relating to their desired outcomes for the implementation of the mentoring program. Both the deans and the committee member interviews were conducted either by an individual interviewer or a team of two. The interviews were recorded, transcribed and analyzed by the research team. Using an inductive process, coupled with triangulation, the responses from the interviews were aligned with the research questions as part of the data analysis.

In addition to the interviews with the deans and committee members, two focus group sessions with new faculty were conducted. These focus groups focused on the degree of perceived success orientation and mentoring had on the new faculty. The first focus group had four participants (each from different colleges) and the second had two participants (who were also from different colleges).

**Findings**

Through data analysis, and the use of an inductive process, several themes emerged. The information provided below is a compilation of stakeholder and participant feedback derived from observations, surveys, focus groups and interviews. The faculty who were able to participate in the focus group provided insightful information that was corroborated by the new faculty surveys, thus validating the findings through triangulation.
Development of the NISE Program

The impetus to develop the NISE Program came from the academic deans, with the primary focus being to enhance student learning, increase student retention through effective teaching, and model pedagogical practices across disciplines in support of CCSS. This point was articulated repeatedly, and can be illustrated by the following citation from an interview.

…the ultimate rationale was to ensure that our students are successful, and to do that, we have to make sure that our faculty members are as well prepared as they can be, use appropriate learning strategies, teaching strategies and we wanted to give them an opportunity to have access to that [type of learning experience] throughout the orientation process. (D2)

This approach was a significant departure from previous new faculty orientations. One committee member described the former orientations as a “virtual tour of the phone book.” In the past, members of campus organizations such as Human Resources and Library Services would introduce themselves and present at the orientation. At no time were learning strategies discussed or demonstrated. While the development of the NISE Program was enthusiastically conceived, there were comments about the time constraint placed on implementation that resulted in some logistical challenges to be addressed. In hindsight, one of the committee members suggested “if we would have had a year, we could have started this process and made it more vocal and a more visible process” (C2).

Faculty Contracts

It was clear new faculty believed the institution supported them, as evidenced by the institution providing the orientation. “The fact that the university has one, it sends a strong signal about the university and its commitment to its faculty” (FG1-3). However, one dean mentioned the initial start date on the faculty contract did not match the expected start date. “We had already issued appointment contracts for all our faculty and told them that they were to be here one day and we wanted them to come a different day” (D3).

Logistics

Based on the feedback from the stakeholders, there was consensus about a commitment to teaching excellence. “It’s going to take a lot more [than three days], it’s going to take a cultural change to begin with to really celebrate on this campus and campuses like us that teaching excellence is paramount” (D3). A change in culture takes time and persistence. However, it was also pointed out through the interviews that there are faculty members who do not believe this focus is necessary, stating “we wouldn’t have hired them if they weren’t good teachers” (D3).

Mentoring Process

Several new faculty mentioned the university’s commitment to mentoring to be somewhat of a surprise. Yet, it was clear from interviews with the academic deans that this was a priority aspect of the NISE Program. One dean described their orientation and mentorship as a new faculty as follows:

I have a doctorate in [expertise] and I began teaching courses with absolutely no training, other than I sat down with the department chair for about an hour, and he said, “Here’s what you do with the syllabus. Here’s what the grade distribution looks like over time.
Don’t be too easy. Don’t be too hard.” That was my orientation to teaching. I just had to rely on what I had learned from…other professors. (D2)

The NISE committee mentoring program is non-evaluative and provides instructional feedback for all new faculty members. “[I] appreciate [name] so much because it is a non-threatening thing, it is not evaluative. It is purely feedback and something that I think all teachers need to grow” (FG1-4). New faculty were impressed that the existing faculty wanted to demonstrate teaching excellence and help others achieve the same (D3); however, there was confusion as to whether the NISE committee mentoring facet was required or voluntary (FG2-2).

The faculty who had participated in the NISE mentoring process were very pleased with the outcome and benefited from the focused, non-evaluative process. “[Just] having personal contacts and someone to go to with questions [was helpful]. It is also beneficial for them to be outside of the department or at least a little bit removed from their specific program” (FS4).

Orientation Process

The pre-orientation survey revealed a diverse population of new hires (those with no teaching experience, and those with many years of teaching experience), which created a challenge for the NISE committee. Caffarella (2002) describes the need for adult learning to be applicable to the current situation, which was identified as a problem with the orientation program. With the varying levels of pedagogical experience, many of the new faculty with teaching experience that felt their time could have been better spent.

“I think with new faculty who have never experienced any sort of teaching this would be really beneficial but I found some of it to be kind of repetitive, and it was stuff that I already know, and had already practiced and experienced.” (FG1-4)

It was suggested that dividing the orientation into appropriate sections based on experience level would have been beneficial. “Perhaps it would be better serviced if it were split into smaller work sessions” (FG1-3). However, NISE committee members reported that the newly-hired faculty participated in such a way that there was a benefit for this diversity of experience. For example, one faculty member new to teaching said “I thought it was beneficial, especially with large classes” (FG1-1), and a more seasoned teacher commented, “I learned from it as well. It is always fun when you are in education to learn more” (FG1-2).

Orientation Feedback

When asked if new faculty had integrated any of the information or lessons provided during orientation into their classrooms, many replied affirmatively. Several participants noted that they had incorporated interactive learning activities in their classrooms, which was one goal of the orientation. “I have utilized several of the interactive learning technique, and I have started to implement backward design concepts on a very small basis” (FS14). One survey response addressed student learning. “Oh yes [applying information]. As a matter of fact, I have found my students retain knowledge better when they have more hands on work. Worksheets in the classroom and labs have been great” (SF12).

In contrast, some of the survey participants commented that the orientation had had little effect on their teaching. Having several years of teaching experience prior to coming to UCM accounted for this. “It had little effect on my teaching. I have taught at the university level for about 14 years now and my educational background is in education” (SF4).
One of the focus groups discussed the desire to have peer mentoring as part of the orientation to create a practice environment, which could allow “the new faculty to actually practice the things they have been [taught]” (FG1-4).

**Pedagogy as Practice**

The primary focus of the orientation and mentoring process was the enhancement of teaching effectiveness, based on the belief that more effective teaching leads to increased learning, student retention, and a better understanding of CCSS. Effective teaching comes from practice and prior experiences, and stakeholders validated the need for pedagogy to be addressed.

The vast majority of our faculty that come [to UCM] have zero [teaching] experience. As a doctoral student, I learned how to do research and I understand all of that piece but I had never taught a full semester course in my life. (D3)

One committee member addressed the lack of pedagogy practice in the sciences stating “it’s all about the research and learning the theory, but there’s not a lot focused on the actual instructional side” (C2). From the data, as discussed earlier, it was clear that first-time teachers benefitted from the pedagogical aspects of the orientation program and implemented some of the concepts immediately. A new faculty member described his educational experience as one focused solely on research “…I wasn’t really taught the philosophy of teaching, engaging students and things like that” (FG1-1).

**Program Evaluation Process**

Stakeholders and committee members were asked what outcomes were necessary for them to deem the NISE program successful. They focused on four elements: student retention, faculty satisfaction/retention, establishing expectations, and setting new faculty up for success.

“We want to ensure that our students are successful and to do that, we have to make sure that our faculty members are as well prepared as they can be and use appropriate learning strategies, teaching strategies, and we wanted to give them an opportunity to have access to that throughout the orientation process. (D2)

**Socialization and Networking**

One of the strongest benefits of the orientation program was the opportunity for socialization and networking provided by the mentoring aspect of the NISE program. “Networking with other faculty members – very valuable” (SF2). Participants particularly liked the ‘outside-the-department, non-evaluative’ nature of the mentoring program.

**Technology**

Technology was another key area for change. Overwhelmingly, the survey data and focus group comments indicated a need for more time and for instruction on Blackboard and Banner. The new faculty members wanted hands-on time and practical experience with this technology and they wanted it earlier. “Starting August 1st, I could have cherry picked those [IT courses] throughout the entire month, and really felt prepared even more than I did going into the first day of class. I would have really liked that” (FG1-1).

**Conclusions and Implications for the Future**

Developing an institutionally-driven mentoring program is a shift in paradigm and will require an appropriate period of adjustment. Institutional leaders and new faculty had varying
views in regard to the outcomes. The leaders involved are visionaries and passionately dedicated to the success of this program. Faculty, though split in their opinion on many concerns, definitely described their most valuable take-away from the mentoring program as developing relationships within the UCM. The relationships developed were more about UCM rather than any singular/departmental mindset.

As with any newly designed program, there were peaks and valleys to chronicle. Communication in regard to the NISE program tended to be muddled at times, which created confusion amongst the ranks of new faculty. Timing was one of the most commonly reported issues when discussing the orientation process. Faculty overwhelmingly reported a preference to begin the orientation process earlier, or to extend it over a longer period using shorter blocks of time.

Hands-on experience with the technology utilized on campus was requested (well before class begins), possibly incorporating laboratory time. This could also include a peer-reviewed look at personal syllabi or a mini-lesson plan. First-time teachers reported utilization of orientation and mentoring techniques in their day-to-day routine. There were rich, descriptive data to evidence pedagogy in practice. However, experienced faculty found the techniques to have little effect on their classroom instruction. It was discovered that each department on campus does not consistently provide their new faculty with a mentor, either formal or informal.

As a whole, UCM’s goal was to increase student retention by improving faculty success. A number of faculty members reported an appreciation for the non-evaluative mentoring sessions. Along the same line, many also stated that having a mentor outside of their department was a positive experience. It removed the politics and interdepartmental issues and got to the heart of teaching. Conclusively, faculty members were astonished by the passion and commitment of the NISE committee and stakeholders. It was noted that establishing such a program indeed sends a loud message throughout the institution that they are committed to faculty (SF3).

With an official start date of August 2012, the NISE program is still in its early stages. It is impossible to measure programmatic success in such a brief amount of time. The goals of student retention and increased faculty success could be addressed in future research. The question as to whether or not mentoring assists with student retention could have ‘direct impact’ on university resources. As with any program, it will take several years to establish a set of meaningful data to correlate with student retention, faculty retention and the success of both.

**Program Evaluation Limitations**

The primary limitation to this program evaluation was the challenge of making contact with participants. There were several attempts made to coordinate focus group dates and times. As a result of low participation, the research team requested amendment to the original IRB approval to allow for survey data. Once the data had been collected, it became clear that several of the faculty who answered the survey and participated in the focus groups had not initiated contact with the program coordinator for the mentoring with the NISE Program coordinator. With implementation of the NISE program in August 2012, there was also limited data to collect. Had this evaluation been conducted later in the academic year there may have been more information gathered on the mentoring aspect of NISE program.
References

Ackerman, D., Gross, B. L., & Vigneron, F. (2009). Peer observation reports and student evaluations of teaching: Who are the experts? *Alberta Journal of Educational Research, 55*(1), 18-39.

Balkin, D., & Mellow, J. (2012). Facilitating and creating synergies between teaching and research: The role of the academic administrator. *Journal of Management Education, 36*(4), 471-494.

Berschback, R. (2010). Everything that new and adjunct business faculty members should ask about teaching, but don’t know enough to ask. *Journal of College Teaching and Learning, 7*(5), 13-23.

Brown, S. (2003). Working models: Why mentoring programs may be the key teacher retention. *Techniques, 78*(5), 18-21, 62.

Bryant-Shanklin, M., & Brumage, N. W (2011). Collaborative responsive education mentoring: Mentoring for professional development in higher education. *Florida Journal of Educational Administration & Policy, 5*(1), 42-53.

Caffarella, R.S. (2002). *Planning programs for adult learners a practical guide for educators, trainers, and staff developers* (2nd ed.). San Francisco, CA: Jossey-Bass

Collins, J. B., & Pratt, D.D. (2011). The teaching perspectives inventory at 10 years and 100,000 respondents: Reliability and validity of a teacher self-report inventory. *Adult Education Quarterly, 61*, 358.

Cullen, R., & Harris, M. (2008). Supporting new scholars: a learner-centered approach to new faculty orientation. *Florida Journal of Educational Administration & Policy, 2*(1), 17-28.

Feiman-Nemser, S. (2003). What new teachers need to learn. *Educational Leadership, 60*(8), 25-29.

Good, A., Greene, H., O’Connor, K., & Zhang, G. (2011). Finding balance: a challenge for untenured faculty. *International Education Studies, 4*(4), 3-12.

Hargreaves, A., & Fullan, M. (2000). Mentoring in the new millennium. *Theory into Practice, 39*(1), 50-56.

Huston, T., & Weaver, C. L. (2008). Peer coaching: Professional development for experienced faculty. *Innovations in Higher Education, 33*, 5-20.
Jones, A. (2008). Preparing new faculty members for their teaching role. *New Directions for Higher Education, 2008* (143), 93-100. doi: 10.1002/he.317

Kirkpatrick, D. L. (2006). Seven keys to unlock the four levels of evaluation. *Performance Improvement, 45*(7), 5-8.

Kirkpatrick, J., & Kirkpatrick, W. (2009). The Kirkpatrick model: Past, present and future. *Chief Learning Officer*, November, 20-23, 55.

Lumpkin, A. (2011). A model for mentoring university faculty. *The Educational Forum, 75*(4), 357-368. doi: 10.1080/00131725.2011.602466

Madhavaram, S., & Laverie, D. (2010). Developing pedagogical competence: Issues and implications for marketing education. *Journal of Marketing Education, 32*(2), 197-213. doi: 10.1177/0273475309360162

Major, C. H., & Palmer, B. (2006). Reshaping teaching and learning: The transformation of faculty pedagogical content knowledge. *Higher Education, 51*(4), 619-647. doi: 10.1007/s10734-004-1391-2.

Minter, M.K. (2009). Teaching Inside the Box. *Journal of College Teaching & Learning, 6*(1), 29-34.

Patton, M.Q. (2008). *Utilization-focused evaluation* (4th ed.). Los Angeles, CA: SAGE Publication, Incorporated.

Richlin, L. (1995). Preparing the faculty of the future to teach. *Teaching Improvement Practices*, 255-282.

Smailes, J., & Gannon-Leary, P. (2011). Peer mentoring – is a virtual form of support a viable alternative? *Research in Learning Technology, 19*(2), 129-142.

Steensma, H., & Groeneveld, K. (2010). Evaluating a training using the “four levels model”. *Journal of Workplace Learning, 22*(5), 319-331.