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## Instructional Designers as Leaders in Professional Learning Communities: Catalysts for Transformative Change

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Instructional designers are not often found in a public school setting. However, the leadership an instructional designer can provide, especially as part of a professional learning community (PLC), could help achieve the transformational change for which many schools are looking. With the issues cited by Hoyle and Kutka (2008) in public education today, such as the drop out rate and increased necessity for remedial coursework at the college level, the need for effective instructional design practices being implemented by high school teachers is great. However, as Moallem (1998) notes, "Teachers' use of instructional design practices is not encouraging (Driscoll, 1989; Martin, 1990). Research on teacher planning and decision-making processes (e.g., Brown, 1988; Kagan, 1992; Reynolds, 1992; Shavelson, 1983) revealed that teachers typically do not plan and provide instruction in accordance with [instructional design] procedures" (p. 38). Change is required if education is to meet the rapidly changing needs of society today. Evidence is building that change in instructive practice does not occur unless faculty become involved in leadership, including professional development and professional learning communities (Bezzina, 2006; Colbert, Brown, Choi, & Thomas, 2008; Pijanowski, 2010). The implementation of professional learning communities (PLCs) in a public school requires leadership from both administration and from faculty. While it may seem counterintuitive, guidance and direction from the faculty is more important than the management of the administration. Specifically, an instructional designer would have a vital role in the success of a professional learning community striving toward transformative instructional change, and should be part of the faculty team.

## Key Components

### Analysis of the Problem

Instructional designers are not typically employed in a high school setting, yet teachers are expected to create or find their own curriculum to meet the standards of their content area without instructional design support. Professional development often centers around data collected from standardized tests or school surveys; however, little is done to provide teachers with tools to resolve the problems they find when analyzing the data by creating good designs for learning. As Meister (2010) found, "teachers are being asked to implement reform initiatives without having a solid understanding of the change or proper training in the skills needed to implement it" (p. 885). Teachers may recognize good instructional practice, but in the time-pressed reality of everyday teaching, they do not have the time to develop it, especially when they have not been fully trained in the models and processes of what Merrill (2009) describes as "effective, efficient and engaging (e<sup>3</sup>) instruction" (p. 16). This is not to say that there are not outstanding teachers in the realm of public education; almost every student has a story of a teacher who made a difference in their life. However, even exceptional teachers strive to continually improve their work. Bradley (2009) notes that the changes in education today, including "the volume of information we must manage and... the new opportunities provided through technology... require a different instructional design approach that incorporates content, pedagogy, social interaction and technology" (p. 21). Giving teachers the time, resources, and knowledge to use instructional design

principles will provide support in this effort. This can happen through a collaborative effort of the faculty, with an instructional designer helping to lead the change.

### **Instructional Designers as Leaders**

In order to sustain the transformative change, a sustainable source of fresh ideas and perspectives is needed. Peck, Gallucci, Sloan and Lippincott (2009) find that “sources of new ideas and innovations were consistently traced to individuals” (p. 23). Change in instructional practice will be possible when instructional designers are allowed to serve as the sources “of new ideas and innovations” (Peck et al., p. 23) for other teachers; the PLC can be the vessel through which these ideas are disseminated. Niesz (2010) demonstrates a difference “between the value of network participation and the limitations of traditional ‘one-shot’ approaches to professional development... we learn, grow, and change through sustained practice/situated activity in communities” (p. 37). This difference means that the continued presence of an instructional designer in a district, especially as a leader in the professional learning community, can help to sustain the change.

The instructional designer has the potential to significantly assist a school in their teaching and learning, and therefore provide benefits for both the learners and fellow faculty. These instructional leaders will have a firm foundation in instructional design. An instructional designer has more specialized training than a teacher; an instructional designer’s expertise is in looking at the whole picture of learning and then creating a solution to best meet the needs of the learner. Andrews and Goodson (1980) show that, while “the ‘tried and true’ master teacher method has a long history, it is often unaccompanied by empirical verification of effectiveness” (p. 2). Andrews and Goodson go on to note that, while educators have some knowledge of the methods of instructional design, “educators are often confused about which model to use” (p. 2). An instructional designer can help to clear up this confusion and make recommendations that use the whole learning environment to improve learner achievement.

Instructional design is not a simple prescriptive procedure. Silber (2010) refers to instructional design as a “problem-solving process, not a procedure, made up of a thinking process and a... set of principles and heuristics that form the mental model for expert designers” (p. 24). Part of the instructional design approach is to analyze the learning environment and use that background to inform the designs. Another component includes exploring the media available and choosing the medium or combination of media that will make the best framework for the learning design. From that foundation comes the knowledge and ability to create lessons that provide the best possible learning opportunities for students; that foundation in instructional design can be very helpful in assisting a school district to improve the teaching and learning occurring in its classrooms. The main capacity of the instructional designer can come as a mentor and leader in a professional learning community that involves the entire faculty. This will allow the instructional designer to be the catalyst that creates a widespread reaction, building momentum and improving practice across the school. Therefore, faculty leadership should include instructional designers in order to reap the benefits of the improved pedagogy that can come with using good instructional design principles. The expertise of the instructional designer can be shared across the district within the framework of a professional learning community.

### **Professional Learning Communities**

Farmer, Hauk, and Neumann (2005) discuss how to initiate reform in high school education. Farmer et

al. recommend several “key features of *effective* professional development programs identified in the research literature” (p. 61, emphasis in original). These features include, among others, “distributing activities across an extended period of weeks or months... [and] fostering connectedness and inclusiveness among participants” (2005, p. 61). While it seems obvious upon consideration that the traditional one-day in-services or two-hour presentations are unlikely to produce lasting change in teaching practice, education insists on holding to that model. The instructional designer/teacher must be able to be a part of the staff, working right along with other faculty to improve instruction. Collaboration is a part of a professional learning community, which Wenger (1998) notes can “result in practices that reflect both the pursuit of our enterprises and the attendant social relations” (p. 45). Professional learning communities can also lead essential change in professional development.

Meister (2010) discusses the need for professional learning communities in building successful, positive professional development. In a seminal work on the issue, DuFour, DuFour, Eaker, and Many (2010) define a PLC as “an ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve” (p. 11). This process aligns closely with the work of an instructional designer. In fact, Sims (2009) uses similar ideas to describe the work of an instructional designer when he discusses his proactive design for learning (PD4L). Sims outlines the central component of PD4L as three phases of development of instruction: “develop functionality, evaluate/elaborate/enhance, and maintain” (p. 381). Combining the elements of instructional designer leaders with a budding professional learning community can help begin the transformational change necessary to move a school district toward true designs for learning.

### **Consequences to Stakeholders**

Much has been written about the positive impacts of instructional design on learning (Mayer, 2005, Sims, 2006, and Merrill, 2002a, among others). Merrill (2002b) says that “principles of instruction can be implemented in any delivery system or using any instructional architecture” (p. 42). Irlbeck, Kays, Jones and Sims (2006) indicate that “instructional design tends to be more accepted in business, industry, government, and the military” (p. 173) but note that the use of instructional design in public schools “is beginning to see greater acceptance” (p. 173). This points to the ability of instructional design principles to be used in any learning situation, and so makes the use of instructional design practices in the public school system plausible. Sims (2009) suggests a model of instructional design supported by “an ethos of collaborative design and development teams” (p. 380), which indicates that having instructional designers available to help other teachers design and develop instruction could be beneficial. This urges a leadership role by the instructional designers in the public education sector, and the impact could be most pervasive to stakeholders if leadership were taken in a professional learning community setting.

### **Effects on the Faculty**

Direct impact on faculty may be seen when the instructional designer is a leader in the professional learning community. Colbert, Brown, Choi and Thomas (2008) note potential benefits for faculty, including improved professional development that leads to higher levels of teacher engagement and improved pedagogy. Perhaps one of the biggest issues a district faces with professional development for teachers is the low level of engagement. Meister describes this problem, saying, “in this model, staff development means workshops conducted by outsiders with little or no change evident in practice” (p. 883). Colbert et al.’s research showed that teachers could be “dispirited that they had to attend

regardless of their professional needs” (p. 144). Coggshall, Ott, Behrstock and Lasagna (2010) found that improving professional development and increasing collaborative work also helps with retention of good younger teachers. When the teachers are engaged in the professional development process, they are more satisfied with their school and the professional development opportunities, and will translate their learning into improving instructional practices. The instructional designer can teach these practices within the framework of the PLC as professional development.

Instructional designers acting as leaders in the public school can make a significant positive impact upon fellow teachers by helping to improve their pedagogy. This impact is due, Mangin and Stoelinga declare, to “two unique benefits: They bring a level of specialized knowledge about teaching to the school setting, and they do so outside the line of school authority to promote the development of trust between teachers and the instructional leader” (p. 49). The instructional designer’s work is in building trust and working collaboratively with teachers in specific knowledge of instructional design. This leads to the improvement of instructional practice because of feedback and “collegial critique” (Mangin & Stoelinga, p. 52). Given, Kuh, LeeKeenan, Mardell, Redditt, and Twombly (2010) found that collaborative practice allowed teachers to become more reflective in their teaching, and be more purposeful in their pedagogy. When teachers are given the opportunity to learn about designing for instruction in a non-threatening, collegial environment, instruction improves; this leads to improved student achievement.

## **Effects on the Learners**

Much instructional effort is being put into closing the educational gap between students. Whether the effort is working or not depends on how learning is designed and what instructional practices are being implemented. Achievement gains are not realized when, as Levine and Marcus describe, the approach to reform “is inherently bureaucratic, reducing teachers to cogs in a machine in ways likely to inhibit learning” (p. 120). However, research by Colbert, Brown, Choi and Thomas (2008) shows higher levels of student engagement with improved pedagogy, and also connects good professional learning communities with increased student achievement. As Colbert et al. found, “teachers did not hesitate to claim that their students’ motivation to learn has improved since the teachers integrated new instructional strategies into their teaching” (p. 146). Improving the instructional design practices of the faculty leads to improved student learning; it also holds other benefits for students.

When student are engaged in their learning, it affects their behaviors and choices. O’Farrell and Morrison (2003) showed that academic engagement helps to protect students against substance abuse, risky sexual behavior, and delinquency. Skinner, Furrer, Marchland, and Kindermann (2008) note that student engagement is declining, especially in at-risk populations; their research showed significant positive effects on engagement from teacher support through the instructional design. Jennings (2003) suggests that “meaningful participation” (p. 45) improves student engagement and lessens risky behavior by students. Instructional design principles work to improve engagement and meaningful learning founded in contexts relevant to the learners. Instructional design practices implemented by teachers in a district-wide professional learning community with the help of an instructional designer, then, can realize these benefits to learners. Improved student engagement and decreased risky behavior leads to an impact on the largest group of stakeholders, the community at large.

## **Effects on the Community**

A significant impact could be seen in the effects of instructional design leadership and PLCs on the community served by the public school district. One consequence can be seen in the behaviors and choices of the families of students. Teachers and administration desire parent involvement, and yet it decreases in high school (DePlanty, Coulter-Kern, & Duchane, 2007). A study by Griffin and Galassi (2010) found that one major barrier for parental involvement is teacher instruction. If parents don't feel their child is getting good instruction, they are less likely to be involved in their student's education. This can lead to behavior problems and lowered student achievement, and is a downward spiraling cycle that can be slowed or stopped if teacher instruction could be improved. Good instruction leads to improved parental willingness to work with the teacher and this benefits the student, as well as improving community relationships.

Another potential positive consequence for the community is increased college enrollment for students from underserved populations (Welsh, Brake, & Choi, 2005). Increased college enrollment leads to better job opportunities: the Occupational Outlook Handbook notes, "of the 20 fastest growing occupations, 12 are in the associate degree or higher category" (Bureau of Labor Statistics, 2011, para. 66). Preparedness for those jobs by meeting qualifications is a strong need that can be met by improved instructional design leading to increased student achievement and college readiness. If children in families are furthering their education after high school, they can get better jobs and bring that improved prosperity back to the community as a whole. These benefits can be seen because of the improved instruction that results from an instructional designer's work in the framework of a professional learning community, so it is important to implement the change in a way that is sustainable for the school to provide these benefits long-term.

## **Implementation of Change**

Servage (2008) notes that in a professional learning community, collaboration that involves "inquiry and problem solving in authentic contexts" (p. 63) is vital, as is the building of collegial relationships inside the PLC. Given, Kuh, LeeKeenan, Mardell, Redditt, and Twombly (2010) concur, and add that this collaboration should be supported by documentation such as teaching and learning artifacts that provide opportunity for "conversations and reflections" (p. 38). Therefore, a plan to promote transformative change in a school district to improve teaching and learning and support teachers and learners should (1) implement an instructional design program, including an instructional designer who will work with the teachers to develop lessons, units, or courses; (2) create a professional learning community to help implement appropriate, research-based instructional strategies into current curriculum or revamp curriculum as needed; and (3) include evaluation and reflection to maximize learning for both teachers and students. This implementation will require work from both administration and from the instructional designer as part of the PLC leadership team, albeit in somewhat unexpected way; the instructional designer and professional learning community take the leading role, while the administrators are there to support the team in its functioning.

## **Administrative Role**

Administrators are an important component in creating a district environment where success is possible. Kotter (2008) says that the number one and two reasons why transformation efforts fail are "not establishing a great enough sense of urgency... [and] not creating a powerful enough guiding

coalition” (p. 371, 373). The administration and district leadership have only to pick up today’s newspapers to see the dilemma public education is in. Hoyle and Kutka’s (2008) disturbing picture of education today and the needs of tomorrow could help to provide that sense of urgency. Johnson, Adams, and Haywood authored the 2011 K-12 edition of the New Media Consortium’s (NMC) Horizon report, which shows that there are at least five critical challenges facing public education, including the increase in importance of digital media literacy, limited budgets, an increased need for individualized learning opportunities, the entrenched establishment of educational structure, and the lack of means to utilize learning that happens outside the classroom (pp. 5-6). This report can also help intensify the sense of urgency. Hoyle and Kutka’s article and the NMC report could be posted on a section of the school website, and a collaborative online document can be developed with areas for comments and discussion regarding the need for change and ideas for implementation strategies. With the impetus for change clearly stated, the next role of administration is to develop the vision for the future.

Having a clear vision is one of the critical components for leadership and change. Evaluating the present and then describing what the future might look like can create a vision of the future. Kouzes and Posner (2007) observe that a shared vision can create the power and energy required to move an organization forward. DuFour et al. (2010) describe the need for the administration to provide the “clear and compelling purpose” (p. 19), then allow the staff to function as a team of leaders taking the role of the progress monitor, equipping staff with the time to collaborate and learn, celebrating victories, and holding the team accountable to their own standards and values. These roles are echoed by Mullen and Hutinger (2008), who add that the administration can also “establish themselves as a conduit... to secure partnerships that support reform initiatives, school goals, and teacher learning (Moyer et al., 2006)” (p. 278). Aside from the roles described here, the administrator’s most important job is to authorize the team to do its work.

Leaders who micromanage do not instill the feeling of trust in their followers. Kouzes and Posner (2007) declare, “Individuals who are unable to trust others fail to become leaders... either they end up doing all the work themselves or they supervise work so closely that they become overcontrolling.... The more trusted people feel, the better they innovate” (pp. 224-225). Clark and Gottfredson (2008) say that learning agility, or the ability to meet changing needs and challenges, is about “creating a universal requirement for leaders to demonstrate an emotional and cognitive openness that allows them to learn continuously themselves and create an environment where others feel both motivated and safe to learn as well” (p. 17). This role of building trust should be balanced against the need for support. As Mangin and Stoelinga (2010) find, principals provide a critical form of support in the form of “expectations for teachers to improve instruction and to interact with the teacher leader” (p. 53). Therefore, administrators must walk a fine line between supporting the staff and authorizing them to act. This balance can set the stage for the professional learning community to feel empowered and for the instructional designer to provide guidance for beneficial change.

### **Instructional Designer’s Role**

An instructional designer/teacher should work with all departments to improve instructional strategy choices, use of media for learning, and activities that can improve the achievement of learners. In order to create a realm of influence, the designer/teacher should begin by making themselves available, communicating their willingness to help the staff and sharing their knowledge and experience. Van den Akker, Heres, Lasthuizen, and Six (2009) describe research results that suggest a leader needs to

build trust in order to best work with those in their sphere of influence. Since the instructional designer will probably have to be a current teacher with instructional design training due to budget constraints in public education, the designer would need to be readily accessible and willing to work for little or no extra compensation aside from the intrinsic benefit of knowing that students should be positively impacted. As well, they would need to adopt an attitude of humility and helpfulness, so that co-workers do not perceive haughtiness or superiority from the designer/teacher. By building this sphere of influence, the designer/teacher can then begin to improve the design of instruction.

The job of the instructional designer is to encourage and support the rest of the faculty in the reshaping of the district. This will help address two of Kotter's (2008) errors in implementing change: "undercommunicating the vision by a factor of ten [and] not anchoring changes in the corporation's culture" (p. 375, 380). Mangin and Stoelinga (2010) suggest that teacher leaders should both model the instructional practices and provide counsel in the form of both information and feedback. Recommendations should be ready for presentation, and might include options for developing collaborative e-learning areas, arranging cooperative efforts between leadership and faculty for decisions and direction, setting up "learning and performance support to address formal and informal learning" (Clark and Gottfredson, 2008, p. 31), and providing opportunities for the faculty to initiate their own ideas on implementing the change and find their own learning options that might be helpful in the journey. Once the ideas have been generated as to what instructional changes educators wish to make, the instructional designer will need to support the attempts at implementation.

In order to guide teachers in their efforts to implement new understanding, the instructional designer should provide assistance for teachers or departments in knowledge of research-based strategies for instruction. Rather than starting with full-blown instructional designs, the designer/teacher can offer to provide sessions during in-services to help teachers see the results of recent research that can improve their instructional practice. Because cognitive load theories suggest providing plenty of support for novice learners (Sweller, 2005; Kalyuga, 2005), the designer/teacher should build in scaffolding or collaborative support for teachers like that recommended by Hmelo-Silver (2004) and Hmelo-Silver, Duncan, and Chinn (2006). Since most instructional designs will be used to resolve a moderate- to ill-structured instructional problem (Silber, 2010), scaffolding and support in a collaborative environment can help the instructional designer to guide teachers toward appropriate, effective teaching strategies for specific problems (Hmelo-Silver, Duncan, & Chinn, 2007). This support can be achieved within the framework of the professional learning community with "a commitment to full and open task relevant communication" (Schein, 2008). Once the base for using good instructional strategies is in place, course or systemic needs can be evaluated.

Bolman and Deal (2008) note, "effective structural leaders experiment, evaluate, and adapt" (p. 40). This is true not only in the business world, but also in education. Andrews and Goodson (1980) show that most instructional design models also include a component for evaluation and adaptation following implementation of instructional designs. Evaluation should be done collaboratively by the leadership team with the instructional designer to see how much progress is being made, what is working and what is not, and what might be adapted to work better. Input should be garnered from the faculty by the leadership team during the evaluation process; together with the expertise of the instructional designer and the collaborative faculty efforts, all teaching can be improved. These steps of providing administrative support, involving the faculty, expertly supporting the implementation of new understanding in instructional design, and evaluating progress to adapt and improve instruction, should

place the district on its way toward transformative change.

## Conclusion

In their examination of educational change, Clark and Gottfredson (2008) note that “the way forward is not an easy one... what’s universally true is that during the next decade organizations... will be sorely tested” (p. 34). Along the way, district leadership can find hope for the future. As Kouzes and Posner (2008) indicate, “there’s a generation of leaders searching for the opportunities to make a difference” (p. 32). This leader can be an instructional designer added to the staff of a public school, or a teacher looking to improve their personal leadership and benefit their school simultaneously by earning an advanced degree in instructional design. The leaders can then include all staff involved in the professional learning community, which impacts the district staff and students, and community surrounding the district. An instructional designer leading a professional learning community with the support of the administration has this opportunity to make a difference, one student, faculty member, and community at a time.

## References

- Andrews, D. H. & Goodson, L. A. (1980). A comparative analysis of models of instructional design. *Journal of Instructional Development*, 3(4), 2-16.
- Bezzina, C. (2006). “The road less traveled”: Professional communities in secondary schools. *Theory Into Practice*, 42(2), 159-167.
- Bolman, L. G. & Deal, T. E. (2008). Reframing leadership. In J. V. Gallos, (Ed.), *Business leadership: A Jossey-Bass reader* (2nd ed., pp. 35-49). San Francisco, CA: Jossey-Bass.
- Bradley, J. (2009). Promoting and supporting authentic online conversations – Which comes first – The tools or instructional design? *International Journal of Pedagogies and Learning*, 5(3), 20-31.
- Bureau of Labor Statistics. (2011). Overview of the 2008-18 projections. *Occupational Outlook Handbook, 2010-2011 Edition*. Retrieved from <http://www.bls.gov/oco/oco2003.htm>
- Clark, T. R. & Gottfredson, C. A. (2008). In search of learning agility: Assessing progress from 1957 to 2008 (Special Report). Retrieved from <http://www.elearningguild.com/content.cfm?selection=doc.1054',700',450'>
- Coggshall, J. G., Ott, A., Behrstock, E., & Lasagna, M. (2010). *Retaining teacher talent: The view from generation y*. Retrieved from Learning Point Associates website: <http://www.learningpt.org/expertise/educatorquality/genY/Gen%20Y%20report.pdf>.
- Colbert, J. A., Brown, R. S., Choi, S., & Thomas, S. (2008). An investigation of the impacts of teacher-driven professional development on pedagogy and student learning. *Teacher Education Quarterly*, 35(2), 135-154.
- DePlanty, J., Coulter-Kern, R., & Duchane, K. A. (2007). Perceptions of parent involvement in academic achievement. *Journal of Educational Research*, 100(6), 361-368.

- DuFour, R., DuFour, R., Eaker, R., & Many, T. (2010). *Learning by doing: A handbook for professional learning communities at work* (2nd ed.). Bloomington, IN: Solution Tree Press.
- Given, H., Kuh, L., LeeKeenan, D., Mardell, B., Redditt, S., & Twombly, S. (2010). Changing school culture: Using documentation to support collaborative inquiry. *Theory Into Practice, 49*(1), 36-46. doi: 10.1080/00405840903435733
- Griffin, D. & Galassi, J. P. (2010). Parent perceptions of barriers to academic success in a rural middle school. *Professional School Counseling, 14*(1), 87-100.
- Hoyle, J. R. & Kutka, T. M. (2008). Maintaining America's egalitarian edge in the 21st century: Unifying K-12 and postsecondary education for the success of all students. *Theory Into Practice, 47*(1), 353-362. doi: 10.1080/00405840802329466
- Irlbeck, S., Kays, E., Jones, D. & Sims, R. (2006). The phoenix rising: Emergent models of instructional design. *Distance Education, 27*(2), 171-185. doi: 10.1080/01587910600789514
- Jennings, G. (2003). An exploration of meaningful participation and caring relationships as contexts for school engagement. *The California School Psychologist, 8*(1), 43-52.
- Johnson, L., Adams, S. & Haywood, K. (2011). *The NMC Horizon report: 2011 K-12 edition*. Retrieved from [www.nmc.org/publications/2011-horizon-report-k-12](http://www.nmc.org/publications/2011-horizon-report-k-12)
- Kotter, J. P. (2008). Leading change: Why transformation efforts fail. In J. V. Gallos (Ed.). *Business leadership: A Jossey-Bass reader* (2<sup>nd</sup> ed., pp. 370-381). San Francisco, CA: Jossey-Bass.
- Kouzes, J. M. & Posner, B. Z. (2007). *The Leadership Challenge*. San Francisco, CA: Jossey-Bass.
- Kouzes, J. M. & Posner, B. Z. (2008). The five practices of exemplary leadership. In J. V. Gallos (Ed.). *Business leadership: A Jossey-Bass reader* (2<sup>nd</sup> ed., pp. 26-34). San Francisco, CA: Jossey-Bass.
- Levine, T. H. & Marcus, A. S. (2007). Closing the achievement gap through teacher collaboration: Facilitating multiple trajectories of teacher learning. *Journal of Advanced Academics, 19*(1), 116-138.
- Mangin, M. M. & Stoelinga, S. R. (2010). The future of instructional teacher leader roles. *The Educational Forum, 74*(1), 49-62. doi: 10.1080/00131720903389208
- Mayer, R. (Ed.). (2005). *The Cambridge Handbook of Multimedia Learning*. New York, NY: Cambridge University Press.
- Meister, D. G. (2010). Experienced secondary teachers' perceptions of engagement and effectiveness: A guide for professional development. *The Qualitative Report, 15*(4), 880-898.
- Merrill, M. D. (2002a). First principles of instruction. *Educational Technology, Research and Development, 50*(3), 43-59.
- Merrill, M. D. (2002b). A pebble-in-the-pond model for instructional design. *Performance Improvement, 41*(7), 41-46.

- Merrill, M. D. (2009). Finding e<sup>3</sup> (effective, efficient and engaging) instruction. *Educational Technology*, 49(3), 15-26.
- Moallem, M. (1998). An expert teacher's thinking and teaching and instructional design models and principles: An ethnographic study. *Educational Technology, Research and Development*, 46(2), 37-64.
- Niesz, T. (2010). Chasms and bridges: Generativity in the space between educators' communities of practice. *Teaching and Teacher Education*, 26(1), 37-44. doi: 10.1016/j.tate.2009.06.015
- O'Farrell, S. L. & Morrison, G. M. (2003). A factor analysis exploring school bonding and related constructs among upper elementary students. *The California School Psychologist*, 8(1), 53-72.
- Peck, J. A., Gallucci, C., Sloan, T., & Lippincott, A. (2009). Organizational learning and program renewal in teacher education: A socio-cultural theory of learning, innovation and change. *Educational Research Review*, 4(1), 16-25. doi: 10.1016/j.edurev.2008.06.00
- Pijanowski, L. (2010). Teachers click with shared content and anytime access. *Journal of Staff Development*, 31(1), 30-33.
- Schein, E. H. (2008). Creating and managing a learning culture: The essence of leadership. In J. V. Gallos, (Ed.), *Business leadership: A Jossey-Bass reader* (2nd ed., pp. 362-369). San Francisco, CA: Jossey-Bass.
- Servage, L. (2008). Critical and transformative practices in professional learning communities. *Teacher Education Quarterly*, 35(1), 63-77.
- Silber, K. H. (2010). A principle-based model of instructional design. In K. H. Silber & W. R. Foshay, (Eds.). *Handbook of Improving Performance in the Workplace: Volume 1: Instructional Design and Training Delivery* (pp. 23-52). San Francisco, CA: Pfeiffer.
- Sims, R. (2006). Beyond instructional design: Making learning design a reality. *Journal of Learning Design*, 1(2), 1-7.
- Sims, R. (2009). From three-phase to proactive learning design: Creating effective online teaching and learning environments. In J. Willis (Ed.), *Constructivist Instructional Design (C-ID): Foundations, Models, and Practical Examples*. Information Age (pp. 379-391).
- Skinner, E., Furrer, C., Marchand, G., & Kinderman, T. (2008). Engagement and disaffection in the classroom: Part of a larger motivational dynamic? *Journal of Educational Psychology*, 100(4), 765-781. doi: 10.1037/a0012840
- Welsh, J. F., Brake, N., & Choi, N. (2005). Student participation and performance in dual-credit courses in a reform environment. *Community College Journal of Research and Practice*, 29(3), 199-213.

