International Journal of Instruction e-ISSN: 1308-1470 • www.e-iji.net



April 2025 • *Vol.18, No.2 p-ISSN:* 1694-609X

pp. 185-202

Article submission code: 20240806002758

A Case of Micro-Teaching within the Tertiary Training of Ontario Teachers

Thomas G. Ryan

Nipissing University, Canada, thomasr@nipissingu.ca

Daniel T. Ryan

Nipissing University, Canada, danielt@nipissingu.ca

Micro-teaching has existed in tertiary education since the early 1960's and today is utilized globally in teacher education programs. Micro-teaching herein involves reflective practice, experience-based learning, feedback and refinement phases. Micro-teaching herein includes the development of a lesson plan that is implemented in a teaching experience that involves reflection on and after teaching. Case analysis illustrates how micro-teaching incorporates role-play with peers which increases the authenticity of the experience, critical responses from stakeholders, reflection and feedback phases. Results from micro-teaching include reported professional growth and development via teaching experiences augmenting both self-efficacy and self-awareness. Micro-teaching has its limitations, and critics suggest the level of authenticity is problematic lessening usefulness however participant feedback and reflective action supports its continued use in tertiary training of new educators.

Keywords: micro-teaching, reflection, teacher training, role-play, training

INTRODUCTION

Australian education researcher Hattie (2009) gained global attention by examining 800 meta-analyses that studied education; assertions were embraced by many educators, institutions and people world-wide. Hattie was able to make insightful claims that were supported by past research which seemed to resonate with readers for instance Hattie concluded:

The conception of teaching needs to be more related to choosing appropriately challenging learning intentions and success criteria, then enabling the students to attain these goals by monitoring and evaluating the effectiveness of their teaching, while constantly aiming to see learning through the eyes of the students, and creating a safe and cooperative climate to make and learn from errors, from each other (teacher, student and peers), and optimize the feedback to the student about what they are learning. (p.113)

Citation: Ryan, T. G., & Ryan, D. T. (2025). A case of micro-teaching within the tertiary training of ontario teachers. *International Journal of Instruction*, 18(2), 185-202.

The notion of choosing, more carefully, appropriate learning intentions and success criteria guides educators to reflect upon their intentions and standards they observe within teaching. Hattie (2009) further suggested, "four types of instruction found to be most effective on teacher knowledge and behaviour were: observation of actual classroom methods; microteaching; video/audio feedback; and practice" (p.120). Of note here is Microteaching (MT) and practice which had a "large impact on student achievement (d = 0.88) and MT has more of an impact on student achievement than teaching strategies (d = 0.60), home environment (0.57), socioeconomic status (d = 0.57), or class size (0.21)" (Hattie, 2009, p.120). Admittedly, student instruction and achievement are curricular variables that significantly influence both teaching (running a course), and the plan for learning (Komalasari & Saripudin, 2018). Indeed, aims and specific objectives within curriculum dictate the selection and organization of content that is studied and experienced by all stakeholders (Ure et al., 2018).

Within Ontario (Canada) to be certified, teachers must have "completed a minimum three-year postsecondary degree from an acceptable postsecondary institution have successfully completed a four-semester teacher education program and apply to the Ontario College of Teachers (OCT) for certification and pay the annual membership and registration fees" (OCT 2024, p.1). While these requirements are a standard, what is less overt is the cognitive action required to teach, grow and develop professionally. MT offers both overt and covert professional development that if used prudently in teacher training, can enhance and deepen teacher education (Ure et al., 2018). They rationale for MT can be linked to attempts by educational programs to increase the readiness of new teachers (Darling-Hammond, 2016).

Background

Microteaching surfaced in the early 1960's and was utilized at Stanford University in California (Baird et al., 1967). Since its inception, microteaching (MT) has evolved and moved into all disciplines and institutions globally as MT has transformed to suit the needs and logistics of both tertiary institutions and the people that employ this pedagogical mode within curriculum (Cavanaugh, 2022). Recent literature searches found increased MT in a "number of peer-reviewed articles on microteaching; in the last six years alone (2015-2020), an ERIC search shows 141 peer-reviewed articles using microteaching as a descriptor" (Cavanaugh, 2022, p.1).

Theoretically MT is rooted in operant conditioning often called instrumental conditioning which "involves a reinforcer or punisher, which increases or reduces, respectively, the frequency of a voluntary behaviour" (Lee et al., 2021). A preservice teacher will act and if the following results are positive the preservice teacher may repeat that same action based on the positive outcome previously experienced. Positive feedback from mentors, supervisors and peers increases the likelihood of repeating the positive action. However, the opposite is also true as negative feedback can reduce or eliminate similar behaviour/actions in future (Mukuka & Alex, 2024). MT is in theory an opportunity to learn and correct (negatively reinforced) mistakes in resultant actions and responses. MT is cyclical and recursive, and mastery unfolds as teaching is repeated over time as depicted in figure one below. MT facilitates the shaping of teaching

behaviour over time while understanding grows even when covert skills are made overt and reduced into constituent elements and mastered progressively before presentation within a whole lesson (Mukuka & Alex, 2024).

MT has elements of lesson study, experiential learning, peer-teaching, learning centred microteaching, and given rise to blended learning microteaching as described by authors such as (Cavanaugh, 2022; Larey et al., 2023). MT fits within a landscape of progressivism (Dewey, 1963), with its experiential-based learning schemes and reflective practice requirements. MT deepens experiential learning and provides a recursive and unremitting praxis of personal transformation that infuses both self-learning and professional development in education (Impedovo, & Khatoon Malik, 2016; Ryan & Ryan, 2021). Today it is not uncommon to see "peer-taught microlessons recorded on students' iPhones, microteaching offers preservice teachers practice teaching experiences in a scaled-back environment and the ability to review and learn from these early teaching attempts" (Cavanaugh, 2022, p.1).

MT can be dissected into recursive stages such as, planning, teaching, reviewing and reflecting, and re-teaching as noted in Figure one. The teaching stage of MT involves the presentation of a lesson by teachers in training (Thangaraju & Medhi, 2023). This teacher training or pre-service period unfolds in classroom environments that are populated with peers who are also teachers in training. MT requires the presenting teacher to construct a lesson plan, gather instructional supplies, and implement this lesson plan with their peers acting as students (Thangaraju & Medhi, 2023). While the original MT equation called for specific criteria in each stage/mode current MT and related experiences have changed the criteria in ways to suit the local context in which MT is utilized (Ure et al., 2018).

Nasib (2017) suggests, MT achieves the following objectives:

Preparation of student-teachers for the actual teaching practice Reduction of the complexity of the teaching task by allowing student-teachers to concentrate on the practice of specific lesson preparation and presentation skills. Provision of a means of easing the tension on the student-teachers with less trauma, from the theory of methods to the realism of the practical classroom situation and development of critical observation of what constitutes effective teaching. (p.1)

Largely, the purpose of MT is to help students self-discover within pedagogical efforts by encouraging the development of skills of perception and interpretation of significant pedagogical event encounters (Thangaraju & Medhi, 2023; McGarvey & Swallow, 1986), within the teacher training curriculum. MT helps student teachers to increase "communication, collaboration, and reflection during the course of learning how to teach, [while] integrating technology into the microteaching process" (Serdar et al., 2018). The advantages of MT led researchers (Bozkurt & Koyunkaya, 2022; Ledger & Fischetti, 2020) to suggest MT is essential for nurturing pre-service teachers' professional development and self-knowledge (Thangaraju & Medhi, 2023).

METHOD

This review is a unique case within tertiary teaching contexts which unfolded as a reflective experiential story. This case-based story is an exploration that led to an enhanced understanding of complex phenomena (Creswell & Poth, 2018; Yin, 2018). This review is a window for readers to examine MT. Teaching cases are exempt from ethics review based on TCPS2(2022) Article 2.5 (University of Guelph, 2024). This is because the 'intent or purpose' of a teaching case is pedagogical and does not fall under the TCPS2 scope. This case secures realistic and significant information that illuminates phenomena such as MT (Poth & Shannon Baker, 2022). Intents herein focused upon illustration of how MT via role-play with peers increases the authenticity of the teaching experience, critical responses from stakeholders, reflection and feedback. The reflective experience unfolds over a teacher training semester as group of preservice teachers commence MT to self-develop professionally while completing a teacher training course.

To infom this case of MT extant data were accessed via online searches using the EBSCO database. To access MT peer-reviewed and scholarly articles, the Education Research Complete database was accessed through the E-Resources section of the University's library website. To locate articles, the following words and terms were typed into the search engine: "micro-teaching", "teacher training", "experiential learning", "teacher training" and "teacher development". Various articles (N=131) were located via this method of research and a process of reduction undertaken to realize a useful data base of (n=43) sources of information. The database in which the articles were stored allowed the download of the resource to compare, contrast and build this integrative review of MT that captured our local context within Ontario, Canada. Themes emerged via reading which became sub-headings, such as criticism, reflection, planning, revision, and planning were realized following editorial work completed over time.

MT CRITICISM

MT has been criticized due to its somewhat artificial and limited correlation to preservice practicum which unfolds in authentic real-life classroom practice (Erdemir & Yeşilçınar, 2021). MT is not a substitute for practicum within schools, it is a supplemental teaching experience. Nonetheless, it is possible to make efforts to diminish MT criticism by providing more feedback, teaching students how to reflect and increasing the authenticity of MT. Making these efforts produces enhanced experiences and a credible tool for preservice teachers' professional development (Ryan, 2021). MT needs to unfold in a respectful controlled and safe landscape within the teacher training facility. MT experiences inform, refine and instigate teacher growth and improvement (Bozkurt & Koyunkaya, 2022).

Dewey (1934) claimed, "each of us assimilates into himself something of the values and meanings contained in past experiences. But we do so in differing degrees and at differing levels of selfhood. Some things sink deep, others stay on the surface and are easily displaced" (Dewey, 1934, p. 71). The MT experience infuses pre-understanding acquired through personal experience (Dewey, 1934; Ryan, 2011) yet the need to reflect

and listen to feedback is activates deeper learning. Admittedly many life experiences such as MT can be superficial and tacit (Polanyi, 1967), until we reflect, revisit and reinterpret both experience and feedback. The cycle of planning, acting, reflecting (on and in-action), and revision is recursive and unending as the teacher develops, refines and improves praxis (Ryan, 2021).



Figure 1 MT cycle within teacher education

The MT cycle illustrated in figure one progresses within a safe adult teacher education environment with supportive peers who are also learning to become effective educators. MT includes lesson planning, teaching and reflection as proficiency and confidence evolve (Bozkurt & Koyunkaya, 2022; Fernández, 2010). Revision occurs as feedback impacts thoughts and actions. Refinement surfaces via reflections, peer reaction and professor responses which are decoded, processed and utilized by the student-teacher to plan in the next cycle of MT. MT complements the social constructivist mode as the zone of proximal development theory supports professional development within teacher training (Ryan, 2021). MT is currently a global mode of instruction that can be found in tertiary institutions in many fields of study and is supported by students, faculty and researchers (Hamidi & Kinay, 2021). MT is yet another means of accumulating teaching experience before stepping into more authentic in-service teaching landscapes.

REFLECTION

Herein reflection is understood as a,

state of mind, an ongoing constituent of practice, not a technique, or curriculum element. Reflective practice can enable practitioners to learn from experience about themselves, their work, and the way they relate to home and work, significant others and wider society and culture. It gives strategies to bring things out into the open, and frame appropriate and searching questions never asked before. It can provide relatively safe and confidential ways to explore and express experiences otherwise difficult to communicate. (Bolton, 2010, p. 3)

Preceding this understanding of reflection Schön (1983) differentiated reflective actions suggesting reflection-in-action is reflection during action rather than reflecting

following the action. Reflection-in-action has adjustments in the moment and reflection-on action leads to adjustments in the future (Mann, 2016, p.260). In both instances reflection is often shared and instils a sense of ability, engagement and inspiration (Bozkurt & Yetkin-Özdemir, 2018).

Whether reflecting in or on-actions admittedly some of our thoughts are superficial and "it is possible to think without either reflecting or learning, thought that involves critical reflection involves learning" (Mezirow, 1990, p. xvii). Learning requires effort, action and Behrendt & Machtmes (2021) propose that when the experience (MT) is driven by intrinsic motivation, student teachers go through the cycles of experience, reflection, abstraction, and retesting.



- Analysis in action
- Active experiencing
- Contrast plan & actions in the moment

Reflection after Action

- Replay experience
- Revisit affective domain
- Reconsider reactions critically
- Address feedback critically

Figure 2
Reflection in and after action

When student teachers feel connected with their learning, they go through the process of critical reflection to deepen understanding, grow and professionally develop (Kusmawan, 2017). The cycle of reflection within MT may diminish or cease altogether when a learner loses interest, or the experience concludes. Still, reflection following the initial learning experience can cause students to revisit and reconsider what happened at both cognitive (covert) and affective (emotional) levels. This mode/phase is about observing and thinking about experience from various perspectives, considering what went well and what could be improved in MT (Bozkurt & Yetkin-Özdemir, 2018). MT is a challenging opportunity to make-meaning from lived teaching experiences that unfold in teacher training (Schwandt, 1994). MT can be replayed, revisited and reconsidered following the experience which provides a resource the student can make use of in future.

PLANNING

As well as planning school days via lesson and unit plans, educators also construct semester and year plans. These planning efforts need be current, informed and detailed to ensure student achievement and certain standards are met. Indeed, Ontario preservice teachers "provide numerous hands-on opportunities for students to develop and refine their knowledge and skills. The learning activities they design should be relevant and authentic for all students, so that students can apply their learning to life beyond the school" (Ontario Ministry of Education, 2024, p.1). It is these actions that bring

planning efforts to life building upon two dimensional plans on paper/digital media towards three dimensions in the educational landscape of the school and/or field. Teachers who succeed are following clear provincial curriculum guidelines, and hopefully locating adequate resources to help students learn and grow. Within the action of implementation, it is critical to ensure that teachers have a voice and can actively participate in decision-making processes in all aspects of planning and instruction (Dreer, 2023).

Teacher education is about becoming; becoming aware of both current and past learning and instructional theory and curriculum developed by education authorities. In Ontario the Ministry of Education lays out curriculum content and suggests ways in which this material can be taught. Once the awareness of curriculum content manifests, teacher development incorporates learning about human development, assessment and evaluation techniques, special education programming and leadership in education among several areas of study. However, teaching is also about "constantly aiming to see learning through the eyes of the students and creating a safe and cooperative climate to . . . optimize the feedback to the student about what they are learning" (Hattie, 2009, p.113). Teaching has many stances, approaches and orientations that are used to reach students in their learning journey, and it is up to the teacher to plan for engagement, learning and personal growth.

A teacher brings with them content knowledge which is "defined as knowledge of subject matter and its organising structures" (Guerriero, 2017, p.85). Combined, initial content knowledge and teacher education classes which unfold over two years in Ontario (Canada) instill a sense of purpose and awareness that is both engaging and motivating for the new educator. Pre-service teachers prepare plans utilizing provincial curriculum guidelines designed for all grade levels. Undeniably, "when planning what students will learn, teachers identify the main concepts and skills described in the curriculum expectations, consider the contexts in which students will apply the learning, and determine students' learning goals" (Ontario Ministry of Education, 2024, p.1). Teacher education also includes examination and learning about basic pedagogy as they utilize content in classroom teaching, for instance, Guerriero (2017) suggested,

application knowledge (or practitioner knowledge, procedural knowledge, knowing how) relates to the knowledge that helps translate the specific content knowledge into the context of the profession. It is continuously gained and improved by experience or training in practice to address specific situations. It is therefore: a) linked with practice. (p.85)

Teacher education incorporating MT involves both planning lessons and implementation of plans within an educational environment with peers acting as students (role-playing). For example, preservice students are expected to plan and implement lesson such as this one in Appendix A, which can be taught with peers acting as grade eight students.

ACTION

Dewey (1938) suggested all "genuine education comes about through experience" (p.25), therefore mixing thought and action is essential while teaching. Moreover, action need not be physical, action can be covert, cognitive and "conversation can play a significant role in the establishment and sustention of collaborative action that can lead to the generation of new knowledge and understanding" (Feldman, 1999, p. 141). Being passive or inactive and focusing on the mental imagery necessary to move forward helps teachers prepare, plan, rehearse and act in ways that are both prudent and measured. Merging teacher thought and action to bond the theory-practice precincts allows educators to take possession of pedagogy from the onset of planning (Ryan & Ryan, 2021).

Undeniably action while teaching involves reflective action to support efforts to examine "moral, ethical and political issues, as well as the instrumental issues, that are embedded in their everyday thinking and practice" (Zeichner, 1983, p. 6). Teacher action is a means to create themselves while learning 'how to be', 'how to act 'and 'how to understand' their work" (Sachs, 2005, p. 15). The capacity of a teacher whether new or experienced, to act, to be the kind of teacher that they want to be requires deep active thinking, reflecting and a sense of who they are and how they have evolved due to experiences teaching (Quirke et al.,2023).

REVISION

As educators and professionals, teachers are expected to process and evaluate new knowledge, resources, skills and procedures introduced in 2024 and beyond. In doing so professional practice grows, changes and is regularly updated within the professional knowledge base (Guerriero, 2017). MT revisions and refinement are "grounded in the ontological '1' of the educator's living logic; that is, educators arrange their philosophy in terms of what they are experiencing (McNiff & Whitehead, 2006, p. 42). The MT experience (Dewey, 1934) is informative and "all direct experience is qualitative, and qualities are what make life-experience itself directly precious" (p.20). Teaching is transformative as the feedback comes from self and others during and after the teaching actions (Ryan & Porier, 2012). Teaching is personal, professional and enriching however, being able to process the actions in teaching requires skillful reflection, feedback and perspective.

Pedagogical knowledge, which is quite flexible and malleable, can be understood as pedagogical content knowledge (PCK) (Shulman, 1986) and/or theory. PCK theory combines pre-service teacher capacity to use research-based practices to teach (Callingham et al., 2016). Therefore, any revision must infuse the PCK theory which impacts teacher actions. Both revision and reflection are "constructivist in nature because it allows the student to take greater ownership of her/his learning by allowing them a means by which to construct their own knowledge rather than just having that knowledge merely spoon-fed to them by others" (Blessinger & Carfora, 2015, p. 5). Being able to revise and change is a sign of self-efficacy, an individual's "self-appraisal"

of capabilities" (Bandura, 1993, p. 118), which implicates the development of preservice student teachers recursively as depicted in figure three below.

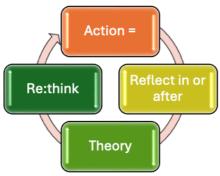


Figure 3 Recursive action, theory, rethinking

MT OUTCOMES AND ATTRIBUTES

MT herein has benefitted from the positive attributes reported in extant literature for example: MT enables preservice "students to try and improve certain teaching skills in a controlled way" (O'Flaherty et al., 2024). MT contributes to "pre-service teachers' acquisition of new knowledge, improves their problem-solving skills, and makes them aware of the learning area" (Hamidi & Kinay, 2024, p. 159). Furthermore, MT supports pre-service teachers to visualize, plan and learn by doing (progressivism), while utilizing feedback to motivate, encourage and prompt certain student behaviours (Hamidi & Kinay, 2024). MT helps student teachers make connections with other school experiences (constructivism) and grow professionally (O'Flaherty et al., 2024).

Admittedly, MT offers preservice students and teaching Faculty a staged learning setting for intervention and analysis of praxis as necessary (Ledger & Fischetti, 2020); and an opportunity for feedback from Faculty and peers who act as students within the MT experience (Sevim & Suroglu Sofu, 2021). MT contributes to the development of teaching capability via experiential learning that is transferable to teaching practicum and in-service teaching (Evangelou, 2022).

SUMMARY

Microteaching as a 1960's process has changed and matured over the years however MT remains a practice within teacher education programmes globally. MT within teacher education programs is a means to illuminate and share pedagogical experiences while preparing new educators for teaching. Training classes become less theoretical when MT is utilized within course work as authenticity is enhanced.

Teacher training in Ontario (Canada) reflects a provincial vision of what teachers need to know and be able to do in class. Teacher education and professional development need be structured to provide skills necessary for successful completion of professional tasks. MT has been found to improve self-evaluation and self-reflective skills, while

helping student teachers develop poise and communicate effectively. MT requires group and time management skills as plans are put into practice within a classroom/gym space. Feedback can be written or vocalized via student (peer) participants and/or professors involved in the MT which is important within the development of teachers.

REFERENCES

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28(2), 117-148.

Baird, J. H., Belt, W. D., & Webb, C. D. (1967). Micro-teaching at Brigham Young University. U.S. Office of Education. https://files.eric.ed.gov/fulltext/ED046894.pdf.

Behrendt, M., & Machtmes, K., (2021). Exploring the catalyst energizing the Kolb learning cycle. *Experiential Learning & Teaching in Higher Education*, *4*(1), Article 11. https://nsuworks.nova.edu/elthe/vol4/iss1/11

Blessinger, P., & Carfora, J. M. (2015). Inquiry-based learning for multidisciplinary programs: A conceptual and practical resource for educators. Emerald.

Bolton, G. (2010). Reflective practice: Writing and professional development. Sage.

Bozkurt, G., & Koyunkaya, M. Y. (2020). From Microteaching to real classrooms: Examination of prospective mathematics teachers' technology-based teaching. *Turkish Journal of Computer and Mathematics Education*, 11(3), 668-705. https://doi.org/10.16949/turkbilmat.682568

Bozkurt, E., & Yetkin-Özdemir, İ. E. (2018). Middle school mathematics teachers' reflection activities in the context of lesson study. *International Journal of Instruction*, 11(1), 379-394. https://doi.org/10.12973/iji.2018.11126a

Callingham, R., Carmichael, C., & Watson, J. M. (2016). Explaining student achievement: The influence of teachers' pedagogical content knowledge in statistics. *International Journal of science and math education*, 14, 1339-1357. https://doi.org/10.1007/s10763-015-9653-2

Cavanaugh, S. (2022). Microteaching: Theoretical origins and practice. *Educational Practice and Theory*, 44, 23-40. 10.7459/ept/44.1.03.

Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry & research design: Choosing among

five approaches (Fourth ed.). SAGE.

Cinici, A. (2016). Preservice teachers' science teaching self-efficacy beliefs: The influence of a collaborative peer microteaching program. *Mentoring & Tutoring Partnership in Learning*, 24(3), 228–249.

Darling-Hammond, L. (2016). Research on teaching and teacher education and its influences on policy and practice. *Educational Researcher*, 45(2), 83–91. https://doi.org/10.3102/0013189X16639597

Denzin, N., & Y. S. Lincoln (Eds.), Handbook of qualitative research. Sage.

Dewey, J. (1934). Art as experience. Pedigree.

Dewey, J. (1963). Experience and education. Macmillan

Dreer, B. (2023). On the outcomes of teacher wellbeing: a systematic review of research. *Frontiers in psychology*, 14, 1205179. https://doi.org/10.3389/fpsyg.2023.1205179

Erdemir, N., & Yeşilçınar, S. (2021). Reflective practices in micro teaching from the perspective of preservice teachers: Teacher feedback, peer feedback and self-reflection. *Reflective Practice*, 22(6), 766-781. https://doi.org/10.1080/14623943.2021.1968818

Evangelou, F. (2022). The contribution of microteaching in teaching practice: a research approach to Greek students, prospective teachers. 10.53 - 68.

Feldman, A. (1999). The role of conversation in collaborative action research. Educational *Action Research*, 7(1), 125-144.

Fernández, M. L. (2010). Investigating how and what prospective teachers learn through microteaching lesson study. *Teaching and Teacher Education*, 26(2), 351–362.

Guerriero, S. (ed.) (2017). Pedagogical knowledge and the changing nature of the teaching profession, OECD. http://dx.doi.org/10.1787/9789264270695-en

Hamidi, N. B. & Kinay, İ. (2024). Meta-Thematic analysis of studies on microteaching techniques for prospective teachers. *Journal of Qualitative Research in Education*, 37,139-171, DOI: 10.14689/enad.37.1856

Hattie, J. (2009). Visible learning: A synthesis of over 800 meta-analyses relating to achievement. 10.4324/9780203887332.

He., C., & Yan C. (2011). Exploring authenticity of microteaching in pre-service teacher education programmes. *Teaching Education*, 22(3), 291–302.

Impedovo, M. A., & Khatoon Malik, S. (2016). Becoming a reflective in-service teacher: Role of research attitude. *Australian Journal of Teacher Education*, 41(1). https://doi.org/10.14221/ajte.2016v41n1.

Komalasari, K., & Saripudin, D. (2018). The influence of living values education-Based civic education textbook on student's character formation. *International Journal of Instruction*, 11(1), 395-410. https://doi.org/10.12973/iji.2018.11127a

Kusmawan, U. (2017). Online microteaching: A multifaceted approach to teacher professional development. *Journal of Interactive Online Learning*, 15(1), 42-62.

Larey, P. D., Nichols, H., & Dhlamini, J. (2023). Discussion of the administration of the microteaching process and content. In C. Okeke, O. E. Adu, M. Mncanca, & C. Ugwuanyi (Eds.), Managing the microteaching process: A practical guide to teaching practice preparation. Van Schaik.

- Ledger, S., & Fischetti, J. (2020). Micro-teaching 2.0: Technology as the classroom. Australasian Journal of Educational Technology, 36(1), 37–54. https://doi.org/10.14742/ajet.4561
- Lee, I. S., Jung, W. M., Lee, Y. S., Wallraven, C., & Chae, Y. (2021). Operant and classical learning principles underlying mind-body interaction in pain modulation: a pilot fMRI study. *Scientific Reports*, 11(1), 1663. https://doi.org/10.1038/s41598-021-81134-6
- Lin., Y. (2014). When microblog meets microteaching: A case study of Chinese K-12 preservice teachers' experiences of using microblog in their reflective practice in microteaching [Unpublished doctoral dissertation]. University of Minnesota.
- Liou, Y-H., Daly, A. J., Canrinus, E. T., Forbes, C. A., Moolenaar, N. M., Cornelissen, F., Van
- Lare, M., & Hsiao, J. (2017). Mapping the social side of pre-service teachers: Connecting closeness, trust, and efficacy with performance. *Teachers and Teaching: Theory and Practice*, 23(6), 635-657. https://doi.org/10.1080/13540602.2016.1218329
- Mahmud, I., & Rawshon, S. (2013). Micro teaching to improve teaching method: an analysis on students' perspectives. *IOSR Journal of Research and Method in Education*, *1*(4), 69-76.
- Mann K. V. (2016). Reflection's role in learning: increasing engagement and deepening participation. *Perspectives on medical education*, *5*(5), 259–261. https://doi.org/10.1007/s40037-016-0296-y
- Martin, B. (2015). Successful implementation of TPACK in teacher preparation programs. *International Journal on Integrating Technology in Education*, 4(1), 17-27.
- McNiff. J., & Whitehead, J. (2006). All you need to know about action research. Sage.
- Mezirow, J. (1990). Fostering critical reflection in adulthood: A guide to transformative and emancipatory learning. Jossey-Bass.
- Mukuka, A., & Alex, J. K. (2024). Review of research on microteaching in mathematics teacher education: Promises and challenges. *Eurasia Journal of Mathematics, Science and Technology Education*, 20(1), em2381. https://doi.org/10.29333/ejmste/13941
- Nasib, T. (September 1, 2017). What is Micro (Peer) Teaching? https://mysominotes.wordpress.com/2017/09/01/ect-300-educational-technology-what-is-micro-peer-teaching-what-is-its-place-in-the-teaching-process/
- O'Flaherty J, Lenihan R, Young AM, McCormack O. (2024). Developing Micro-Teaching with a Focus on Core Practices: The Use of Approximations of Practice. *Education Sciences*, 14(1):35. https://doi.org/10.3390/educsci14010035
- Ontario College of Teachers. (2024). Becoming a teacher: Requirements. https://www.oct.ca/%7E/link.aspx?_id=25CD74DDD6A14F3BA968490666FB1733&_ z=z

Ontario Ministry of Education. (2024). Considerations for program planning: Instructional approaches. https://www.dcp.edu.gov.on.ca/en/program-planning/considerations-for-program-planning/instructional-approaches

Ontario Ministry of Education. (2024). Considerations for program planning: Roles and responsibilities. https://www.dcp.edu.gov.on.ca/en/program-planning/considerations-for-program-planning/roles-responsibilities

Poth, C. N., & Shannon-Baker, P. (2022). State of the methods: Leveraging design possibilities of qualitatively oriented mixed methods research. *International Journal of Qualitative Methods*, 21, 160940692211153. https://doi.org/10.1177/16094069221115302

Polanyi, M. (1967). The tacit dimension. Doubleday

Quirke, S., Espinoza, L., Sensevy, G. (2023). Teacher Professional Identity and Curriculum Reform. In: Shimizu, Y., Vithal, R. (eds). Mathematics Curriculum Reforms Around the World. New ICMI Study Series. Springer, Cham. https://doi.org/10.1007/978-3-031-13548-4_29

Ryan, T. G. (2011). The teacher/researcher and the role of pre-understanding: A personal analysis. *New Zealand Journal of Teachers' Work, 8* (2), 220-228.

Ryan, T.G., & Porier, Y. (2012). Secondary physical education avoidance and gender: Issues and antidotes. *International Journal of Instruction*, 5 (2), 177-193.

Ryan, T. G. (2021). Action research as pre-service teacher inquiry in physical education. *International Journal of Action Research*, 17(2):154-170. DOI:10.3224/ijar.v17i2.04

Ryan, T. G., & Ryan, D.T. (2021). Deweyan progressive education within Ontario health and physical education. *International Journal of Innovation in Teaching and Learning*, *1*(1), *1-12*.

Sachs, J. (2005). Teacher education and the development of professional identity: Learning to be a teacher. In P. Denicolo & M. Kompf (Eds.), Connecting policy and practice: Challenges for teaching and learning in schools and universities (pp. 5–21). Routledge.

Serdar Tülüce H., & Çeçen S. (2018). The use of video in microteaching: Affordances and constraints. *ELT Journal*, 72(1), 73–82.

Schwandt, T. A. (1994). Constructivist, interpretivist approaches to human inquiry. In N. K.

Schön., D.A. (1983). The reflective practitioner: how professionals think in action. Basic Books.

Sevim, O., & Suroglu Sofu, M. (2021). The effects of extended micro-teaching applications on foreigners' views on motivation, and process of learning Turkish. International Journal of Higher Education, 10, 135–150. https://files.eric.ed.gov/fulltext/EJ1310414.pdf

Thangaraju, P., & Medhi, B. (2023). Microteaching: Overview and examination evaluation. *Indian journal of pharmacology*, 55(4), 257–262. https://doi.org/10.4103/ijp.jp_912_21

Ure, C., Hay, I., Ledger, S., Morrison, C., Sweeny, T., & Szadura, A. (2018). Professional experience in initial teacher education: A review of current practices in Australian ITE. Canberra, Australia: Australian Council Deans of Education. https://www.acde.edu.au/wp-content/uploads/2018/06/Final-Report-NADPE-Project-Revised-March-2018.pdf

University of Guelph. (2024). I'm conducting a case study. Do I need REB approval? https://www.uoguelph.ca/research/support-document/im-conducting-case-study-do-i-need-reb-approval

Yin, R. K. (2018). Case study research and applications: Design and methods (Sixth ed.). Sage.

Zeichner, K. M. (1983). Alternative paradigms of teacher education. *Journal of Teacher Education*, 34(3), 3-9.

Appendix A

MT Lesson Plan - Health and Physical Education

Subject/Course: Movement Competence	Name: Student Teacher
Grade Level: 8	Date(s) & Time(s): September 15, 2024 – 11:30 to 12:30
Topic: Basketball – Shooting	Length of Lesson: 60 minutes

EXPECTATION(S):

B1.3 demonstrate an understanding of factors that motivate personal participation in physical activities every day (e.g., gaining health benefits, including release from stress; having interpersonal interactions; becoming more independent in daily living activities; experiencing personal enjoyment), and explain how these factors can be used to influence others (e.g., friends, family, members of the community) to be physically active [A1.1 Emotions, 1.3 Motivation, 1.4 Relationships, 1.6 Thinking]

B2.1 Daily physical activity (DPA): participate in moderate to vigorous physical activity, with appropriate warm-up and cool-down activities, to the best of their ability for a minimum of twenty minutes each day [A1.3 Motivation, A1.5 Self]

- A1.1 apply skills that help them identify and manage emotions as they participate in learning
 experiences in health and physical education, to improve their ability to express their own feelings
 and understand and respond to the feelings of others
- A1.3 apply skills that help them develop habits of mind that support positive motivation and perseverance as they participate in learning experiences in health and physical education, to promote a sense of optimism and hope
- A1.4 apply skills that help them build relationships, develop empathy, and communicate with others
 as they participate in learning experiences in health and physical education, to support healthy
 relationships, a sense of belonging, and respect for diversity
- A1.5 apply skills that help them develop self-awareness and self-confidence as they participate in learning experiences in health and physical education, to support the development of a sense of identity and a sense of belonging
- A1.6 apply skills that help them think critically and creatively as they participate in learning experiences in health and physical education, to support making connections, analyzing, evaluating, problem solving, and decision making

Specific Expectation(s):

- Demonstrate how to properly perform the mechanics of a basketball shot

Understand where you are on the court in relation to others

Learning Goal(s)/Refined Expectations(s):

- Participate safely and actively
- Shoot using correct form (successfully be able to shoot the ball into the net)
- Change rules to accommodate all learners
- Understand what steps go into a successful set up and follow through
- Proper body placement and aiming techniques

Success Criteria

- · Students will successfully preform the proper fundamental movements during lesson
- Participate in all components of the lesson from beginning to end
- Students can perform necessary skills that go into a successful shot
- Participates are actively engaging in activities and working towards self-improvement
- All students are following instruction and working together with teammates

Students will have the chance to acquire the skill of shooting to use in this sport and keep them active for life in future sports

ASSESSMENT/EVALUATION

Curriculum

Assessment of Learning Skills:

- Look for students understanding the multiple steps that go into the proper set up and follow through of the shot
- Look if students are self-correcting themselves, fixing their mistakes to set themselves up for success. Strategy:
 - Once the students have had time to practice their shot after instruction and lesson, get them to individually demonstrate what they have learned
- Ask them open ended questions about the techniques they are using and what can be changed Recording Device:
 - Recording each student's individual ability to perform a shot and their techniques that go into set up and follow through. This is recorded in a rubric
 - Identify strengths and weaknesses of each student and their performance, also record something the entire class can work on in general.

Learning Skills

Skill(s):

Students are using self-regulation:

- Identifying individual goals and knows what to do in progressing towards achieving them
- Seeks assistance when needed
- Tries to respond to challenges

Students are using Initiative:

- Demonstrates they are interest in learning the new skill
- Taking risks and trying the techniques provided
- Approaches all tasks at hand with a positive attitude
- Looks for new opportunities for learning, and continues to want to improve

Recording Device:

- Record overall student participation and noticeable strengths and weaknesses
- Preparedness for class and willingness to learn
- Overall Initiative and interest students have in lesson
- (N.P not participating, D distracted, N.S no shoes, E effort, SR self-regulation)

 DIVERSITY AND INCLUSIVITY

Differentiating Instruction:

- If a student is injured or unable to play, they can still participate in the class by giving points, keeping the students positive, and depending on the severity of the injury can retrieve basketballs and lightly pass back to students.
- Cones available to place at different lengths from the net, this can make it easier or harder. Depending on the student. The nets can also be made higher if need be.

Learner specific accommodations:

Shutting off a row of lights to allow natural light in for students with sensory difficulties

- Have alternatives to each exercise that can be performed when needed.
- Team building exercises for students to feel comfortable performing in front of each other.

LEARNING ENVIRONMENT (Physical Space)

This lesson will take place in a school gymnasium. This is a standard size gymnasium with a full-size basketball court, there are 6 basketball hoops total surrounding the court. Two main nets being on the baseline of the court and 4 more surrounding the sidelines propped against the walls. The additional 4 nets can be pulled out when needed for further use. The additional nets may be required for use if splitting the group up to make larger spacing for the students. Safety of students in the gymnasium needs to be top priority, nets need to be moved and operated only by a trained staff member. Students should not be under nets when they are being moved and should not grab equipment until instructed to do so.

RESOURCES AND MATERIALS

All students will need to come prepared having comfortable loose clothing and running shoes.

- Whistle clip board
- 10 cones pencil
- Running shoes lesson plan / any other resources needed
- 20 basketballs water bottle
- Nets set up 20 handouts- "mechanics of shooting"
- 20 handouts "student self-reflection"

TEACHING/LEARNING SEQUENCE

Beginning (15 Minutes)

Activation

Instruct students on what todays task will be before allowing them to take a basketball. This takes away the distraction of them having balls in their hands while listening to instructions.

- Take Attendance
- Today we will be going over the basics and proper form of a basketball shot
- Ask students if they have any prior knowledge or experience of how to properly shoot a basketball
- Remind students of safety requirements; do not shoot the basketball when a student is standing
 directly under the basket as it could lead to a head injury; make sure no balls are left on the ground
 where someone can trip/fall when going in for a rebound (see appendix B for safety/risk
 management)
- Dynamic warm-up (student lead)
- Students will then spread out around the gym with enough space that they can practice proper form
 without shooting on a net. The educator will demonstrate correct form without a ball, then with a
 ball and allow students to get comfortable with the three phases (Preparation, Execution, and
 follow-through)

Middle/Action/Application/Exploration:

Action (5 Minutes)

- 1. Show students shooting technique again this time using a net.
- Remind students of the three phases of shooting
- Preparation phase: looking at target, feet shoulder width apart, keep shooting fingers spread across ball, moves shooting foot forward, keeps wrist looked
- Execution Phase: Release the ball in the direction of the net, keep shooting fingers spread apart, release ball in direction of net using finger pads and flicking the wrist
- Follow-through Phase: follows through with fingers and hand pointing towards the basket
- Remind students of safety concerns before sending off in groups.
- 2. Students will then be divided into 6 groups, one group per net, and one ball per student.

Application (15 minutes)

- Students will then take turns shooting from pylons placed on the ground (stationary shooting), and as they improve, they can move to a more challenging cone for their skill level.
- The educator will walk around carefully monitoring all groups and providing students with feedback on their technique while monitoring safety in the gymnasium.

Exploration (20 minutes)

1. Students will be paired or split into groups of 3 depending on numbers at each net each to play 21.

This will allow students to show/demonstrate skills learnt during class along with self-motivation, thinking, and relationships

- 2. Players will determine who goes first, second and third
- 3. First player will take a shot from the free-throw line. If the shot is made, they earn 2 points, if the player misses player 2 will catch the rebound and shoot from where they catch the ball. If player 2 makes the shot, they would earn 1 point. Every time a player makes a basket, they get to keep the ball and shoot from the free-throw line for 2 points.
- 4. All shots made from the free-throw line are 2 points and all shots made from anywhere else off a rebound are worth 1 point.
- 5. The first player to reach 21 without going over wins the game. If time permits students can play again or change partners/group members with other groups

Note: to accommodate all learners, smaller balls can be used and the location where free-throws occur can be moved closer by using a cone to mark the shooting spot.

End: Consolidation/Communication (5 minutes)

- 1. Blow whistle to end activity
- 2. Ask students to pick up any pylons, and return balls to proper storage locations
- 3. Quickly recap the important aspects of a proper basketball shot
- 4. Have students complete a self-reflection (see Appendix A)
- 5. Collect self-reflection (exit card) and dismiss students

TEACHER REFLECTION

- Equipment was set up and ready to go with student help.
- Teaching of basketball shot mechanics went well, I used a student from the basketball team who already had a strong understanding of the mechanics to help demonstrate
- Monitored groups to make sure there was no inappropriate behavior.
- Monitored class for safety (i.e., concussions protocol, hazards such as balls left on the floor)
- Had to remind students to make sure no classmates were under the net when they were shooting (concussion risk management)
- Almost all students participated and engaged in activities
- One student did not have correct footwear for class, this student was involved with the class by helping monitor for potential safety hazards along with seeing if classmates were following the three-phase approach to shooting (preparation, execution, follow through)

Appendix B - Teaching Rubric

Unit: Basketball – Shooting Class: Grade 8 Phys Ed Overall Expectations:

- Use positive communication and be responsive to off-task behaviors
- Make learning engaging and inclusive for all students
- Follow expectations from Ontario Curriculum
- Identifies expectations and links activities to curriculum

Success	Level 1	Level 2	Level 3	Level 4
Criteria	(Limited)	(Some)	(Considerable)	(High Degree)
Management	Never or hardly uses	Educator	Educator	Educator
and	and models	sometimes	frequently and	effectively and
Communication	appropriate verbal communication, non- verbal	effectively uses and models appropriate verbal	effectively uses and models appropriate verbal	always uses and models appropriate verbal
	communication, demonstrates	communication, non-verbal	communication, non-verbal	communication, non-verbal
	awareness/responds to off-task	communication, demonstrates	communication, demonstrates	communication, demonstrates
	behaviours along	awareness/responds	awareness/responds	awareness/responds

Curriculum Use and Understanding	with reinforcing positive behaviour. Little to no control over students. Little to no content is taken and used from Ontario Curriculum. Activity does not follow curriculum standards or expectations.	to off-task behaviours along with reinforcing positive behaviour Some curriculum expectations are met and communicated through activities to students that somewhat align with curriculum standards.	to off-task behaviours along with reinforcing positive behaviour A significant amount of content is drawn from the curriculum expectations to create a structured well-planned lesson.	to off-task behaviours along with reinforcing positive behaviour Activities are drawn from curriculum and educator has a high understand of how to demonstrate and use curriculum expectations throughout the lesson.
Commitment to Learners	Negative and little communication with learners. Educators does not create a safe space where all learners feel included and welcome.	Educator sometimes try's to be positive with students and starts to try and build a rapport with some students. Some students feel safe and welcome.	Educators almost always is enthusiastic and positive when interacting with students. Asks thought provoking questions and engages all learners in problem solving and decision making.	Educator effectively interacts and engages with all learners, creates positive problem- solving opportunities while allowing students to make decisions. Is always enthusiastic and positive when interacting with students.
Instructional Process	Hardly identifies lesson expectations, links activities to the curriculum, engages learners with questions, or opportunities to apply skills. Never or hardly adjusts for all learners or checks for safety concerns.	Sometimes identifies lesson expectations, links activities to the curriculum, engages learners with questions, or opportunities to apply skills and sometimes adjust for all learners or checks for safety concerns.	Almost always identifies lesson expectations, links activities to the curriculum, engages learners with questions, or opportunities to apply skills and adjusts for all learners or checks for safety concerns.	Always effectively identifies lesson expectations, links activities to the curriculum, engages learners with questions, or opportunities to apply skills and adjusts for all learners or checks for safety concerns.

Additional Notes/Observations: