

The effect of bingo-KDK game to improve preservice counselor communication skills

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ABSTRACT

Basic communication skills are primary modalities for the counselor and should be developed from their preservice education. In Indonesia, most guidance and counseling major provide the basic communication skills course as a hybrid course, containing both theoretical and practical learning. This model had many challenges in making a balanced outcome for both the theoretical knowledge and practical skills. This research aims to test the bingo-*keterampilan dasar komunikasi* (KDK) as an integrated learning strategy of bingo games, reverse role-play, and reflection sessions to improve preservice counselors' basic communication skills. This research used a quantitative method with a randomized control trial (RCT) experiment design. This research involved 56 preservice counselors, divided randomly into experiment and control groups. The measurement used is the performance test of the basic communication skills course. Data analysis focused on measuring basic statistics and t-tests. The results show the experiment group has higher results and is significantly different from the control group. This effectiveness was supported by the learning atmosphere that indirectly increased the involvement of the preservice counselor. This research suggests exploring the mental experience and performance measurement during the learning sessions using the bingo-KDK game.

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1. INTRODUCTION

Basic communication skills are a primary modality for helpers, especially counselors. These skills are essential in interacting, involving, understanding, and directing the counselee to the best alternative decision [1]. Specifically, these skills provide better therapeutic relationship development through behaviors and emotional communication [2]–[4]. Based on its role, basic communication skills should be learned and developed by counselors from their educational stage as pre-service counselors in their higher education.

In Indonesian higher education counseling majors, basic communication skills are often provided in a hybrid design. The design facilitates both theoretical and practical learning experiences in one course [1]. Using this design, the knowledge and practical skills experienced within one semester. However, it is also challenging to design the proper course that facilitates both theoretical and practical experience in balance, especially with standardized criteria to achieve at the end of the semester. Experiential learning is one of the alternative models to provide theoretical knowledge and practical skills [5], [6]. Many previous research studies have developed learning designs based on this model. There was role-play [7], [8], digital games [9],

simulations [10] locally based games [11], [12]. The focus of most previous research was to provide a real-based experience to explore and analyze their theoretical framework constructions. Previous research also proves that implementing games as learning strategies improves physical activities and skills, strategic thinking, competitive atmosphere, and student engagement [13], [14]. These results were mentioned in most game genres, including physical games, strategic games, digital games, and even local-based games. In advance, there were also learning strategies that integrated the game and other activities to create ideal strategies to support the learning purpose [15].

In addition, the students' internalization of learning results and their experiences need to be supported by reflection sessions [16]. The reflection activities provide a better understanding of their performance, especially to identify the cognitive, affective, and behavioral aspects related to the performance [17]. Reflection is provided after the real-based experience learning activity. As the final process of the learning sessions, reflection is crucial for students to draw their learning conclusions and meaning [18], [19].

Furthermore, the learning strategies of the basic communication skills course should integrate a theoretical review strategy, a real-based experience learning strategy, and reflection activities. The game, role-play, and reflection activities provide the functions mentioned. Bingo games, reverse role play, and reflection activities were some of the integrated alternatives that could be used. The bingo games had the strategic thinking process of the student's theoretical knowledge [20]. The reverse role-play had a broader experience for each student to explore [7]. The reflection sessions became the support for students to internalize the learning experiences [21]–[23].

This research aims to test the developed learning strategies that integrated those three activities mentioned. Specifically, this research aims to test the effect of bingo-*keterampilan dasar komunikasi* (KDK) games on improving preservice counselors' basic communication skills. Theoretically, this research contributes to testing the integrated learning strategies in basic communication skills courses for preservice counselor education. Practically, this research measured the feasibility and effectiveness of the bingo-KDK games for the basic communication skills course. The research question to support the research is "how is the effectiveness of bingo-KDK games implemented in the improve preservice counselor basic communication skills course? The research question was followed by a hypothesis as follows, "the bingo-KDK is significantly effective in improving the preservice counselor's basic communication skills."

2. METHOD

A quantitative method with experiment design was used for this research. Specifically, this research used a randomized control trial (RCT) experiment design. A RCT explores the relationship between an intervention and an outcome based on the random allocation of the group [24]–[26]. RCT had the exact purpose of this research to measure the effectiveness of bingo-KDK game as an intervention, compared to the conventional learning design in the basic communication skills course.

The participant criteria for this research were the 2nd or 3rd-semester active students of guidance and counseling major, and all participants had not programmed the basic communication skills course. Based on these criteria, the participants involved were 56 preservice counselors. All participants were divided randomly into two groups: "experiment group" with 28 preservice counselors and "control group" with 28 preservice counselors. Both groups were involved in theoretical review sessions, intervention sessions, and final performance exam sessions.

Measurements used in this research focused on measuring the final performance test of students' basic communication skills in the final exam of the course. The instrument used to measure preservice counselors' basic communication skills was the performance sheet. Another instrument was a performance report to measure both performance skills and theoretical knowledge. The performance sheet and performance report evaluation criteria were following the curriculum and learning design of counselor education.

The procedure of the research focused on three main sessions of the course. The first sessions focused on theoretical review sessions. In these sessions, both groups experienced focused group discussions to gain and construct their knowledge of basic communication skills. The following sessions were the intervention sessions. The experiment group experiences the "bingo-KDK games" as the learning strategies. The control group used the peer practice based on scenario as the learning strategies. The final sessions focused on testing the basic communication skills as the course outcomes. Both groups had peer counseling practice as the test model, with random counselees, and without scenario. The performance was measured using the performance sheet, and the practitioners should write a performance report after the test.

Data analysis used in this research focused on: i) describing the performance of both groups using basic statistics and ii) analyzing the difference and comparing the significance of both groups using a t-test. The basic statistics describe the performance level of the participants in each group in general. The t-test will determine the difference between the group outcomes and test the research hypothesis. Specifically, the paired-t-test was used to measure the significance level of difference between the pretest and posttest scores for each group. The independent t-test was used to answer the hypothesis by comparing the posttest scores from both groups.

3. RESULTS AND DISCUSSION

3.1. Descriptive results of experiment and control group

The research results describe the descriptive measurement of both group pretest and posttest score. The detailed results shown in Table 1. Based on the data in Table 1, the N-Gain score value in the experimental group was 0.201 (20.1%), which is included in the low category. The N-Gain score in the control group was 0.120 (12%), which is included in the low category. Descriptively, in the two groups, it was found that there were relatively low differences in pretest and posttest scores.

Table 1. Descriptive results of both groups

| Group | N | Pretest | | Posttest | | N-gain score |
|------------|----|---------|----------------|----------|----------------|--------------|
| | | Mean | Std. deviation | Mean | Std. deviation | |
| Experiment | 28 | 84.178 | 1.785 | 87.428 | 1.619 | 0.201 |
| Control | 28 | 84.500 | 2.099 | 86.464 | 1.895 | 0.120 |

3.2. Paired sample-t-test

Before the t-test analysis, the data was analyzed using assumption check and resulting the normality of the data. Specifically, the one-sample Kolmogorov-Smirnov test shown the asymp. sig. (2-tailed) of the data was at 0.399 (above 0.05). As the data was normal, the following test measured the differences level of each group, detailed in Tables 2 and 3. The data in Table 3 shows that the difference between the pretest and posttest results in the experimental group has a statistically significant difference. The significant value indicates this. (2-tailed) of 0.000 (under 0.05). This means there is a significant difference between pretest and posttest scores in the experiment group. Conversely, the data in Table 4 shows that the difference between the pretest and posttest results in the control group has a statistically significant difference. The significant value indicates this. (2-tailed) of 0.000 (under 0.05). These results show the control group also had significant differences between pretest and posttest scores. In other words, both treatments used in both groups had successfully improved the basic communication skills of preservice counselors.

Table 2. Paired samples test of experiment group

| Group | Mean | Std. deviation | Std. error mean | Paired differences 95% confidence interval of the difference | | t | df | Sig. (2-tailed) |
|------------------|--------|----------------|-----------------|---|--------|---------|----|--------------------|
| | | | | Lower | Upper | | | |
| Pretest-posttest | -3.250 | 1.691 | .319 | -3.905 | -2.594 | -10.167 | 27 | 0.000 |

Table 3. Paired samples test of control group

| Group | Mean | Std. deviation | Std. error mean | Paired differences 95% confidence interval of the difference | | t | df | Sig. (2-tailed) |
|------------------|--------|----------------|-----------------|---|--------|---------|----|--------------------|
| | | | | Lower | Upper | | | |
| Pretest-posttest | -1.964 | 0.961 | 0.181 | -2.337 | -1.591 | -10.810 | 27 | 0.000 |

Table 4. Independent samples test of control group

| Test | | Equal variances assumed | Equal variances not assumed |
|---|---|-------------------------|-----------------------------|
| Levene's test for equality of variances | F | 0.007 | |
| | Sig. | 0.935 | |
| t-test for equality of means | t | 2.213 | 2.213 |
| | df | 54.000 | 52.904 |
| | Sig. (2-tailed) | 0.031 | 0.031 |
| | Mean difference | 1.035 | 1.035 |
| | Std. error difference | 0.467 | 0.467 |
| | 95% confidence interval of the difference | | |
| | Lower | 0.097 | 0.097 |
| | Upper | 1.973 | 1.974 |

3.3. Independent sample-t-test

The following results describe the difference level of the posttest score of both groups. The detailed of the independent t-test was described in Table 4. The data in Table 4 shows that the post-test results between the experimental group and the control group have a statistically significant positive difference. This was indicated by the significant value (2-tailed) is 0.031 (below 0.05), and the t-value is positive. Thus, the post-test results in the experimental group showed more effective learning outcomes compared to the control group,

and the implementation of the bingo-KDK game strategy in learning the basic communication skills course was effective in improving preservice counselor learning outcomes.

3.4. General discussions

The research results describe the bingo-KDK game's effectiveness as a learning strategy in the basic communication skills course. The effectiveness followed the significant comparison between the pretest and posttest of the experiment group compared to the control group. Bingo-KDK and the conventional method of peer practice based on scenario had the same significant difference in the pretest and posttest scores. However, the bingo-KDK performed better in posttest comparison of both groups. The difference was significant in that it indicates the bingo-KDK game provides better outcomes to improve preservice counselor's basic communication skills.

The bingo-KDK games had been successfully adopting the bingo games into learning strategies. The randomized box of communication skills in the bingo-KDK cards becomes the primary strategic thinking during the games. As the rule of communication skills involved, strategic thinking not only focused on gathering the line of the box but also on analyzing the appropriate communication skills to be used for the situation given. Specifically, strategic thinking will enhance the analysis process of their knowledge construction and planning the practical implementation directly [26], [27].

The bingo-KDK games involved reverse role play to support the simulation of communication skills. These roleplays provide the chance for all group members to simulate [7] the communication skills they choose. Following the simulation, all the group members reflected on it and analyzed whether it was the appropriate communication skills and appropriately executed [28], [29]. The simulation provides the experience to use their communication skills. This was supported by the following reflection to enhance the same experience for all group members.

In general, the game and role-play integration provide a competitive and fun atmosphere during the sessions. These atmospheres indirectly enhance their involvement, both cognitive, affective, and behavioral [1], [30], [31]. Specifically, their involvement focused on the course students and became the counselor for the counselee given. Due to the nurturant effect, they learn to be appropriately involved in the counselor role. Their involvement made them use their knowledge of the basic communication that related and appropriate to they can reflect many possibilities of communication skills provided in the bingo card.

The reflection activities support the internalization of their experience during the sessions [32]. Reflection activities become their reflective practice both for reflection-in-action and reflection-on-action [33], [34]. The reflection-in-action focused on the performer's mental experience during the game and performance. The reflection-on-action focused on other counselors' roles to reflect the simulation performed. This will provide their metacognition process to gain better control of their mental experience [35], [36]. In advance, as the reflection activities went on, there were also discussions and reflections on further decisions to direct the communication process to the next stage. This will become the advanced level of reflective practice, reflection-for-actions [37], [38]. This reflection enhances their metacognition level to strategic and reflective use levels [39]. At this level, the focus is more than controlling mental experience but using all the cognitive functions as automatic decisions for further actions [40]. For a counselor, these skills will provide better decision, direction, adjustment, and professionalism for their helping performance [41].

This research provides the effectiveness of the bingo-KDK game for practical implementation. However, this research was limited to the final performance measurement of the course. This research has limited exploration of performance measurement during the sessions and also the mental exploration during the sessions. Another limitation of this study was the curriculum design tested was explicitly based on the Universitas Negeri Malang curriculum. As Indonesia has various models of the curriculum in each university, this study's results can't be generalized to all universities in Indonesia.

4. CONCLUSION

This research aims to test the effectiveness of bingo-KDK games as learning strategies to improve pre-service basic communication skills. The research results indicate that the bingo-KDK game significantly differs in effectiveness results based on the experiment and control group comparison. The bingo-KDK games provide a competitive and fun atmosphere to enhance the pre-service counselor involvement. Specifically, the involvement was formed not only as a learner in the class but mainly as a counselor role. The reflection activities support the internalization of the learning experience and develop preservice counselor reflective practice competence. Further exploration should focus on performance measurement and mental experience exploration during the sessions. Further development should focus on the integration of different practical courses, different curricula, multicultural settings, or digital-based learning.

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REFERENCES

- [1] N. Hidayah, M. Ramli, L. Fauzan, D. H. Rahman, and H. Hanafi, "Mind skills training effect on prospective counsellor's performance," *Cypriot Journal of Educational Sciences*, vol. 17, no. 4, pp. 1178–1191, Apr. 2022, doi: 10.18844/CJES.V17I4.7130.
- [2] C. J. Easterbrook and T. Meehan, "The therapeutic relationship and cognitive behavioural therapy: a case study of an adolescent girl with depression," *The European Journal of Counselling Psychology*, vol. 6, no. 1, pp. 1–24, Feb. 2017, doi: 10.5964/ejcop.v6i1.85.
- [3] T. Jibeen, "Unconditional self acceptance and self esteem in relation to frustration intolerance beliefs and psychological distress," *Journal of Rational - Emotive and Cognitive - Behavior Therapy*, vol. 35, no. 2, pp. 207–221, Jun. 2017, doi: 10.1007/s10942-016-0251-1.
- [4] F. Wahyuni, B. B. Wiyono, A. Atmoko, and Im. Hambali, "Assessing relationships between emotional intelligence, school climate and school counselors burnout: a structural equation model," *Journal for the Education of Gifted Young Scientists*, vol. 7, no. 4, pp. 1361–1374, 2019.
- [5] J. S. Barna, "Experiential learning in school counselor preparation: supporting professional skill development," *The Journal of Counselor Preparation and Supervision*, vol. 13, no. 3, pp. 1–28, 2020.
- [6] D. A. Kolb, *Experiential learning: experience as a source of learning and development*. Englewood Cliffs, NJ: Prentice Hall, 2015.
- [7] L. Fauzan, N. Hidayah, F. Wahyuni, H. Hanafi, R. Rofiqoh, and N. A. Kurniawan, "The effect of reverse roleplay training to improve the counselor's mind skills," *Journal of Education and Learning (EduLearn)*, vol. 17, no. 4, pp. 491–498, Nov. 2023, doi: 10.11591/edulearn.v17i4.20752.
- [8] J. R. Rodríguez *et al.*, "Peer counselling versus role-playing: two training methods of therapeutic skills in clinical psychology," *Psicothema*, vol. 30, no. 1, pp. 21–26, 2018.
- [9] Z. Yusoff, A. Kamsin, S. Shamshirband, and A. T. Chronopoulos, "A survey of educational games as interaction design tools for affective learning: thematic analysis taxonomy," *Education and Information Technologies*, vol. 23, no. 1, pp. 393–418, Jan. 2018, doi: 10.1007/s10639-017-9610-5.
- [10] N. Simon, "Improving higher-order learning and critical thinking skills using virtual and simulated science laboratory experiments," in *New Trends in Networking, Computing, E-learning, Systems Sciences, and Engineering*, Springer Verlag, 2015, pp. 187–192, doi: 10.1007/978-3-319-06764-3_24.
- [11] H. C. Darong, "Local-culture-based materials in online cooperative learning: improving reading achievement in Indonesian context," *Journal of Innovation in Educational and Cultural Research*, vol. 3, no. 3, pp. 361–372, Mar. 2022, doi: 10.46843/JIECR.V3I3.113.
- [12] A. A. Ramadhansyah, M. Mulyana, T. Ulfa, and M. Miftakhuddin, "Eight Javanese teaching issues and its possible solutions: a systematic literature review," *Journal of Innovation in Educational and Cultural Research*, vol. 3, no. 2, pp. 162–176, Feb. 2022, doi: 10.46843/JIECR.V3I2.78.
- [13] S. I. De Freitas, "Using games and simulations for supporting learning," *Learning, Media and Technology*, vol. 31, no. 4, pp. 343–358, Dec. 2006, doi: 10.1080/17439880601021967.
- [14] J. L. Plass, B. D. Homer, and C. K. Kinzer, "Foundations of game-based learning," *Educational Psychologist*, vol. 50, no. 4, pp. 258–283, Oct. 2015, doi: 10.1080/00461520.2015.1122533.
- [15] C. L. Arden and J. Kvist, "BANG – a smartphone application to help athletes return to sport following anterior cruciate ligament reconstruction: protocol for a multi-centre, randomised controlled trial," *BMC Musculoskeletal Disord*, vol. 21, no. 1, p. 523, Dec. 2020, doi: 10.1186/s12891-020-03508-7.
- [16] V. Griggs, R. Holden, A. Lawless, and J. Rae, "From reflective learning to reflective practice: assessing transfer," *Studies in Higher Education*, vol. 43, no. 7, 2016, doi: 10.1080/03075079.2016.1232382.
- [17] P. Slepcevic-Zach and M. Stock, "ePortfolio as a tool for reflection and self-reflection," *Reflective Practice*, vol. 19, no. 3, pp. 291–307, May 2018, doi: 10.1080/14623943.2018.1437399.
- [18] M. H. van Loon, "Self-assessment and self-reflection to measure and improve self-regulated learning in the workplace," in *Handbook of Vocational Education and Training*, Cham: Springer International Publishing, 2018, pp. 1–20, doi: 10.1007/978-3-319-49789-1_88-1.
- [19] Y.-L. R. Wong and J. Vinsky, "Beyond implicit bias: embodied cognition, mindfulness, and critical reflective practice in social work," *Australian Social Work*, vol. 74, no. 2, pp. 186–197, Apr. 2021, doi: 10.1080/0312407X.2020.1850816.
- [20] N. Puspita, A. H. Losari, I. Raden, and I. Lampung, "The influence of using bingo game towards students' vocabulary mastery at the first semester of the seventh grade of MTs N 2 Bandar Lampung in the academic year of 2016/2017," *English Education: Jurnal Tadris Bahasa Inggris*, vol. 9, no. 2, p. 394, 2016.
- [21] A. Ghanizadeh, "The interplay between reflective thinking, critical thinking, self-monitoring, and academic achievement in higher education," *Higher Education*, vol. 74, no. 1, pp. 101–114, Jul. 2017, doi: 10.1007/s10734-016-0031-y.
- [22] C. R. Wilder *et al.*, "School counseling site supervision: training recommendations to benefit school counselor interns and site supervisors," *Journal of Counselor Preparation and Supervision*, vol. 16, no. 1, p. 4, 2022.
- [23] M. Coetzee, "When protean career values intertwine with employee–employer obligations: reviewing digital era work mindsets for modern psychological contract practices BT - redefining the psychological contract in the digital era: issues for research and practice," M. Coetzee and A. Deas, Eds., Cham: Springer International Publishing, 2021, pp. 95–109, doi: 10.1007/978-3-030-63864-1_6.
- [24] L. Cohen, L. Manion, and K. Morrison, *Research Methods in Education*. London: Taylor & Francis, 2018.
- [25] J. W. Creswell, *Educational research: planning, conducting, and evaluating quantitative and qualitative research*. London: Pearson Education, 2013, doi: 10.1017/CBO9781107415324.004.
- [26] M. Salam, L. Misu, U. Rahim, N. Hindaryatiningsih, and A. R. A. Ghani, "Strategies of metacognition based on behavioural learning to improve metacognition awareness and mathematics ability of students," *International Journal of Instruction*, vol. 13, no. 2, pp. 61–72, 2020, doi: 10.29333/iji.2020.1325a.
- [27] A. Shaw *et al.*, "Thinking critically about critical thinking: validating the Russian HEIghten® critical thinking assessment," *Studies in Higher Education*, 2019, doi: 10.1080/03075079.2019.1672640.
- [28] L. M. Lamprecht and S. Pitre, "Developing a pre-practicum environment for beginning counselors: growing my counselor educator self," *The Journal of Counselor Preparation and Supervision*, vol. 11, no. 2, pp. 1–33, 2018.




- [29] L. Vandenberghe, A. Marden, C. Marla, and V. Bittencourt, "Building and handling therapeutic closeness in the therapist-client relationship in behavioral and cognitive psychotherapy," *Journal of Contemporary Psychotherapy*, vol. 48, pp. 215–223, 2018, doi: 10.1007/s10879-018-9388-9.
- [30] H. Liu, J. Liu, and X. Chi, "Regulatory mechanism of self-determination involvement in higher education: assessing Chinese students' experiences," *Higher Education*, vol. 67, no. 1, pp. 51–70, Jan. 2014, doi: 10.1007/S10734-013-9640-X/TABLES/5.
- [31] N. Zarifanaiey, M. Amini, and F. Saadat, "A comparison of educational strategies for the acquisition of nursing student's performance and critical thinking: simulation-based training vs. integrated training (simulation and critical thinking strategies)," *BMC Medical Education*, vol. 16, no. 1, pp. 294–300, Dec. 2016, doi: 10.1186/s12909-016-0812-0.
- [32] C. S. Sargent, "Evidence of reflective thinking across the curriculum: college experience versus individual courses," *Higher Education Research & Development*, vol. 34, no. 3, pp. 624–640, May 2014, doi: 10.1080/07294360.2014.973375.
- [33] T. J. Mavin and M. W. Roth, "Between reflection on practice and the practice of reflection: a case study from aviation," *Reflective Practice*, vol. 15, no. 5, pp. 651–665, Sep. 2014, doi: 10.1080/14623943.2014.944125.
- [34] D. Schön. *The reflective practitioner: how professionals think in action*. New York: Basic Books, 1984.
- [35] N. Hidayah, L. Fauzan, F. Wahyuni, and H. Hanafi, "Conceptual development of online psychological assessment training design for guidance and counseling teachers on the academic life of high school students," *International Journal of Interactive Mobile Technologies (iJIM)*, vol. 16, no. 06, pp. 81–91, Mar. 2022, doi: 10.3991/IJIM.V16I06.28965.
- [36] M. Ramli, H. Hanafi, N. Hidayah, A. Atmoko, and F. K. Fitriyah, "Identification of counselor mind process on online counseling," *International Journal of Evaluation and Research in Education (IJERE)*, vol. 12, no. 1, pp. 319–326, Mar. 2023, doi: 10.11591/IJERE.V12I1.22987.
- [37] S. Arango-muñoz, "Two levels of metacognition," *Philosophia (Mendoza)*, vol. 39, pp. 71–82, 2011, doi: 10.1007/s11406-010-9279-0.
- [38] X. Zhu, "Student teachers' reflection during practicum: plenty on action, few in action," *Reflective Practice*, vol. 12, no. 6, pp. 763–775, Dec. 2011, doi: 10.1080/14623943.2011.601097.
- [39] C. A. Williams, L. A. K. Takaki, and R. LeFebvre, "Measuring the level of metacognitive regulation in graduate health sciences students: what is the value of a prompt?" *Medical Science Educator*, vol. 29, pp. 409–418, 2019.
- [40] L. De Backer and H. Van Keer, "Examining evolutions in the adoption of metacognitive regulation in reciprocal peer tutoring groups," *Metacognition and Learning*, vol. 11, pp. 187–213, 2016, doi: 10.1007/s11409-015-9141-7.
- [41] A. Bernstein, Y. Hadash, and D. M. Fresco, "Metacognitive processes model of decentering: emerging methods and insights," *Current Opinion in Psychology*, vol. 28, pp. 245–251, Aug. 2019, doi: 10.1016/j.copsyc.2019.01.019.

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


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