



DOI: <https://doi.org/10.38035/dijemss.v7i5>
<https://creativecommons.org/licenses/by/4.0/>

Enhancing Work Team Performance and Collaboration through a Kolb Experiential Learning-Based Training Module

Triana Lestari¹, Ratna Djuwita²

¹Universitas Indonesia, Depok, Indonesia, [triana.lestari41@ui.ac.id](mailto: triana.lestari41@ui.ac.id)

²Universitas Indonesia, Depok, Indonesia, [rjuwita31@gmail.com](mailto: rjuwita31@gmail.com)

Corresponding Author: [triana.lestari41@ui.ac.id](mailto: triana.lestari41@ui.ac.id)¹

Abstract: This study set out to develop and pilot-test a training module to strengthen work-team performance and collaboration within a School Violence Prevention and Handling Team (TPPKS) that operates under the mandate of Permendikbudristek No. 46 of 2023. We opened with a qualitative needs assessment of an active TPPKS and found recurring collaboration problems, including low participation, unclear roles, and slow case handling. Drawing on Kolb's experiential learning cycle and social interdependence theory we designed a module that moves through ice-breaking and a video into a positive-versus-negative team role-play and then through reflection and concept delivery toward action planning. Because the session was a trial we recruited master's students to stand in as proxies for genuine team members and ran a one-group pretest-posttest pre-experimental design in which eleven participants supplied the data we processed in IBM SPSS Statistics while we examined concept-level patterns thematically in NVivo. Pretest and posttest means turned out identical at 76.36 and produced no significant difference at $t(10) = 0.000$ and $p = 1.000$ and $N\text{-gain} = 0.00$ even as score variability fell from a standard deviation of 15.02 down to 8.09. The NVivo analysis showed that understanding of the core constructs improved while several applied items declined, and we conclude that within a high-baseline proxy sample the module did not lift mean understanding because a ceiling effect constrained it and yet it homogenized and reshaped the key concepts in a way that makes the module feasible once it is refined and retested with real team members.

Keywords: Team Performance, Team Collaboration, Social Interdependence, Kolb Experiential Learning, Violence Prevention.

INTRODUCTION

Rettew and Pawlowski (2016) describe bullying as a deliberate and repeated form of aggression that surfaces whenever a power imbalance separates a perpetrator from a victim, and they note that it can take physical or verbal as well as relational or digital forms whose damage reaches far past the immediate distress that victims feel. Repeated victimization gradually erodes a student's social development alongside their sense of safety and their academic achievement over the long run, and schools come to treat the prompt prevention and

handling of bullying not as a simple matter of discipline but as a central duty in protecting how children grow.

Violence inside Indonesian schools remains a pressing concern and the Indonesian Child Protection Commission (KPAI) recorded 314 bullying complaints across educational settings during 2024 in a figure that shows how far schools still stand from building the safe and conducive learning environments that remain free of violence. Bullying has also grown more varied in form and this complexity frustrates

early detection so that a number of cases surface only after they have already harmed their victims badly.

To confront this challenge the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) issued Permendikbudristek No. 46 of 2023 and obliged every school to set up a School Violence Prevention and Handling Team known as the TPPKS. A typical TPPKS brings together a chairperson and a secretary alongside an advocacy division and a prevention-and-intervention division while drawing in guidance-and-counseling teachers together with the school committee and homeroom teachers as well as administrative staff. This team carries the responsibility for preventing and identifying every form of violence and bullying as well as handling and following up on each case, which makes plain that genuine prevention rests on a school environment able to respond quickly and accurately in a way that stays integrated.

Mandating that a team exist does not on its own produce teamwork that actually works, and an initial assessment we carried out at one school through semi-structured interviews and a review of documents surfaced several collaboration problems that kept returning. Participation among members was low and uneven, while only about three of them stayed consistently active, and certain members, and above all the committee representative, never grasped what their roles truly were, even as heavy workloads constrained everyone and the school appointed the team outright rather than forming it around any willingness to serve. The gravest problem appeared when a reported case moved through handling so slowly that the situation escalated into a sharper conflict in which one student endured psychological distress together with verbal bullying and ostracism from peers.

Social interdependence theory as set out by Johnson and Johnson (2021) helps make sense of these symptoms because it treats group outcomes as a product of how members tie their goals to one another. Positive interdependence links each member's success to the success of the others and turns the group cooperative while negative interdependence pits members against each other so that one person's gain shrinks everyone else's chances, and an individualistic structure simply leaves each member's outcome unconnected to the rest. Johnson and Johnson (2021) maintain that a group succeeds only when every member contributes and sees that contribution as genuinely necessary, and members who feel their input is dispensable tend to ease off their effort. Low and uneven participation together with information withholding and a readiness to assign blame fit a picture of weak positive interdependence and thin trust, and these are exactly the dynamics our intervention sets out to shift.

Collaboration of this kind rarely strengthens through the transfer of information by itself and develops far better when people work through direct experience and then reflect on it in a structured way. Kolb (1984) offers a well-established framework for precisely this purpose in an experiential learning cycle that moves through concrete experience and reflective observation into abstract conceptualization and finally active experimentation, and a systematic review by Henríquez et al. (2025) reports that the cycle works well for building transversal competencies such as communication and teamwork. A role-play that lets participants live the contrast between a positively interdependent team and a negatively interdependent one can turn these abstract dynamics into something concrete that stays

memorable, and building on that idea the present study develops and pilot-tests a Kolb-based training module meant to enhance team collaboration. We framed the research around two questions that ask whether the module improves participants' understanding of team collaboration and how that understanding shifts at the level of individual constructs.

METHOD

We ran this study as a one-group pretest-posttest pre-experimental design and rounded it out with a thematic analysis of how participants understood the material. An approach like this fits a module trial whose purpose is to gauge whether the intervention is feasible and to gather an early signal of its effect on understanding before any controlled evaluation takes place.

Participants and Setting

The first stage took the shape of a needs assessment that we conducted with an operating TPPKS across the 2023/2024 academic year through semi-structured interviews of fifteen to thirty minutes with each division and a review of the supporting documents that ran from the team's decree and organizational structure to its task division and several sample case reports. The second stage was the module trial itself, and although the module is ultimately meant for the TPPKS whose members are teachers we carried this stage out with master's (S2) students standing in as proxy participants because the trial was an initial feasibility test and we wanted to run the procedure safely without disrupting the team's routine. We treat the findings as preliminary results drawn from proxy participants that still need further validation with the actual teacher members of a TPPKS. Inside the role-play the participants took on three roles within one shared scenario as a team showing negative interdependence and a team showing positive interdependence alongside an observer team, and these were genuinely three roles inside a single activity rather than a split of the participants into three separate and unrelated groups. Twelve participants in all completed both the pretest and the posttest and we excluded one entry because the facilitator had submitted it as a trial under their own name a day before the session, which left eleven paired participants for analysis.

Training Module

We grounded the module in the social interdependence theory of Johnson and Johnson (2021) and built its structure around the experiential learning cycle of Kolb (1984), then delivered it in a single session of roughly seventy minutes that ran across seven parts. An ice-breaking activity before the cycle proper built psychological safety and gave way to the pretest. The concrete-experience stage opened with a short video about what happens when a bullying case is mishandled and moved into a contrasting role-play in which one group staged a meeting marked by negative interdependence through interrupting leadership and disregard for members' constraints as well as blaming and information withholding together with scant attention to the victim, while a second group staged a meeting marked by positive interdependence through listening and information sharing alongside mutual help and supportive leadership and a clear orientation toward the victim. Observer feedback and the players' own reflection made up the reflective-observation stage while the abstract-conceptualization stage presented material on group goals and interdependence and trust and the active-experimentation stage had participants formulate an ideal working model for a team. A motivational message closed the session along with a satisfaction questionnaire and the posttest.

Instruments and Data Analysis

We measured understanding with a ten-item multiple-choice test that we administered in

identical form before and after the intervention through Google Forms and scored at ten points for each correct answer so that totals ran from zero to one hundred. The analysis followed two strands. For the quantitative strand we worked in IBM SPSS Statistics and ran descriptive statistics together with the Shapiro-Wilk normality test that suits small samples of fifty or fewer and a paired-samples t-test, and we added the Wilcoxon signed-rank test as a robustness check while computing effect size with Cohen’s d and normalized gain with N-gain. For the qualitative-thematic strand we turned to NVivo and imported the CSV files as a dataset before classifying each case by its measurement time as either pretest or posttest and coding the responses to every item into collaboration-construct nodes, after which we ran a matrix

coding query to compare how many cases counted as concept-appropriate at pretest against posttest. Our coding rested on a deductive framework that we drew from the module material and every construct represents the culmination of the four-stage Kolb learning process that the module applies. Participation stayed voluntary and rested on consent while we anonymized all responses and let participants withdraw at any point without consequence.

RESULTS AND DISCUSSION

Initial Needs Assessment

The needs assessment showed that the team fell short on collaboration even though Permendikbudristek No. 46 of 2023 had formally established it, because only about three members stayed consistently active while the committee and several other members took part sparingly and some members never understood their roles and one case dragged through handling until it grew into a more serious conflict. Read through social interdependence theory these symptoms point to weak positive interdependence and thin trust, and as Johnson and Johnson (2021) observe members who do not see their contribution as necessary tend to pull back their effort. Findings of this kind gave us the basis for an intervention aimed squarely at positive interdependence and trust.

Participant Data

From the twelve students who completed both tests we removed one facilitator trial entry and arrived at eleven paired data sets. Table 1 lays out each participant’s pretest and posttest scores on the zero-to-one-hundred scale and the initial scores already sat fairly high around a mean of 76.36.

Table 1. Participants’ Pretest and Posttest Scores (N = 11)

Participant	Pretest	Posttest	Difference (gain)
P1	60	60	0
P2	80	70	-10
P3	70	80	+10
P4	80	80	0
P5	100	80	-20
P6	90	80	-10
P7	60	70	+10
P8	80	80	0
P9	90	70	-20
P10	80	90	+10
P11	50	80	+30
Mean	76.36	76.36	0
SD	15.015	8.09	14.832

Source: primary data, processed by the author

Quantitative Results (processed with IBM SPSS Statistics)

Table 2 presents the descriptive statistics and while the two measurements returned an identical mean of 76.36 the standard deviation fell from 15.02 at pretest to 8.09 at posttest.

Table 2. Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Pretest	76.36	11	15.015	4.527
	Mean	N	Std. Deviation	Std. Error Mean
Posttest	76.36	11	8.09	2.439

Source: IBM SPSS Statistics output

The Shapiro-Wilk normality test in Table 3 showed that the pretest and the posttest as well as the difference between them never deviated significantly from a normal distribution since every p value exceeded 0.05, which let us proceed with a parametric test.

Table 3. Tests of Normality (Shapiro-Wilk)

Shapiro-Wilk	Statistic	df	Sig.
Pretest	0.945	11	0.582
Posttest	0.866	11	0.069
Difference (Posttest – Pretest)	0.934	11	0.454

Source: IBM SPSS Statistics output; *df* = 11

Table 4 presents the test results and the paired-samples t-test found no significant difference between pretest and posttest with a mean difference of 0.00 inside a 95% confidence interval that runs from

–9.96 to 9.96 at $t(10) = 0.000$ and $p = 1.000$. Effect size came out at zero with a Cohen’s *d* of 0.00 while N-gain also reached 0.00 and sat in the low category, and the Wilcoxon signed-rank test confirmed the same picture at $Z = -0.14$ and $p = 0.886$. Among the eleven participants four improved while three held steady and four declined.

Table 4. Paired Samples Test

	Mean	Std. Dev.	Std. Err. Mean	95% CI of Diff. (L, U)	t	df	Sig. (2-t)
Pair 1 Posttest – Pretest	0	14.832	4.472	–9.96; 9.96	0.000	10	1.000

Source: IBM SPSS Statistics output; *L* = lower, *U* = upper bound of 95% CI

Taken as a whole the module did not lift the participants’ mean understanding, and yet variability narrowed in a striking way as the score range tightened from 50–100 at pretest down to 60–90 at posttest and the standard deviation almost halved. This pattern shows that understanding grew more homogeneous after the intervention because the lower scorers tended to climb while the very highest scorers slipped a little, so the mean held steady even as the distribution converged.

Thematic Results (processed with NVivo)

To trace how the participants’ grasp shifted at the concept level we coded the responses to each item in NVivo into construct nodes that we organized under three parent themes as Table 5 sets out, and a matrix coding query then compared the number of cases marked concept-appropriate at pretest against posttest as Table 6 shows.

Table 5. Thematic Coding (Node) Framework

Node (Construct)	Theme (Parent Node)	Item
Group Goals	Foundations & Group Goals	1
Hidden Agenda	Foundations & Group Goals	2
Social Interdependence	Foundations & Group Goals	3
Positive Interdependence – information integration	Interdependence Structure	4
Positive Interdependence – role alignment	Interdependence Structure	5
Negative Interdependence	Interdependence Structure	7

Node (Construct)	Theme (Parent Node)	Item
Individualistic Interdependence	Interdependence Structure	10
Entitativity	Cohesion, Trust & Identity	6
Distrust / Trust	Cohesion, Trust & Identity	8
Group Cohesion	Cohesion, Trust & Identity	9

Source: NVivo node framework, derived deductively from the module material

Table 6. Matrix Coding Query: Number of Cases Coded “Concept-Appropriate” (N = 11)

No	Node (Construct)	Pretest (n)	Posttest (n)	Δ
1	Group Goals	7	9	+2
2	Hidden Agenda	11	11	0
3	Social Interdependence	7	10	+3
4	Positive Interdependence (information integration)	10	8	-2
5	Positive Interdependence (role alignment)	4	2	-2
6	Negative Interdependence	10	11	+1
7	Individualistic Interdependence	9	6	-3
8	Entitativity	4	6	+2
9	Distrust / Trust	11	11	0
10	Group Cohesion	11	10	-1

Source: NVivo matrix coding query output; Δ = posttest – pretest

The coding matrix uncovers a finer pattern than the aggregate score allows. Comprehension improved on the conceptual and definitional constructs and most clearly on social interdependence as it climbed from seven to ten cases along with group goals from seven to nine and entitativity from four to six as well as negative interdependence from ten to eleven. A few constructs began high and stayed there, namely hidden agenda at eleven of eleven and distrust at the same eleven of eleven. Declines instead showed up on the applied items that

demand fine discrimination, where individualistic interdependence dropped from nine to six while positive interdependence fell from ten to eight in the information-integration scenario and from four to two in the role-alignment scenario and group cohesion eased from eleven to ten. The module sharpened definitional concepts most of all and yet never consolidated how participants apply those concepts to more complex situations, and the role-alignment item in fact remained the least understood construct at both measurements.

Integration with Kolb’s Experiential Learning Cycle

We structured the module around the four stages of Kolb’s (1984) cycle as Figure 1 maps out, delivering concrete experience through the video and the contrasting role-play while reflective observation came through discussion and observer feedback and abstract conceptualization came through the presentation and active experimentation came through formulating an ideal working model.

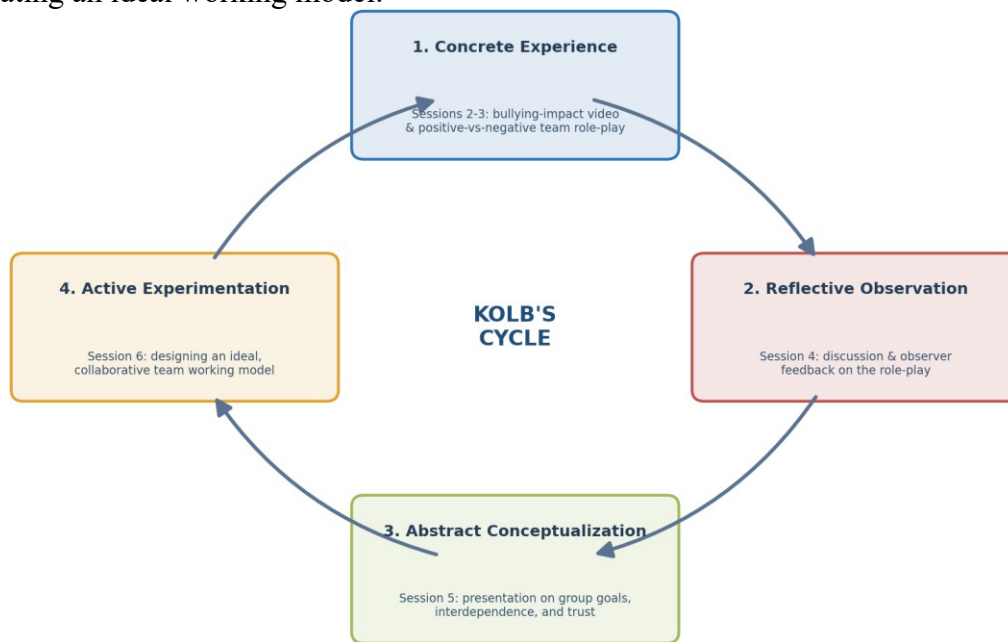


Figure 1. Kolb’s (1984) Experiential Learning Cycle and Its Mapping onto the Module Sessions

Source: prepared by the author based on Kolb (1984)

This framework gives us a way to read the results. The abstract-conceptualization stage looks to have carried the strongest effect because the definitional constructs such as social interdependence and group goals all rose. The concrete-experience stage worked through the contrasting role-play to strengthen recognition of negative interdependence, and yet its sharp emphasis on a positive-versus-negative dichotomy may have pushed participants toward over-generalization on the applied positive-interdependence and individualistic items and pulled those scores down. All of this aligns with the thesis of Kolb (1984) that real learning asks people to complete every stage and repeat the cycle, since a single short session never fully consolidates the transfer from concept into application at the active-experimentation stage. Henríquez et al. (2025) make the same point when they stress that the gains the Kolb cycle brings to competencies such as teamwork tend to surface through sustained application rather than one pass.

Discussion

This trial found no significant rise in mean understanding and still brought two

meaningful phenomena to light in a homogenization of understanding and a set of construct-specific shifts. A ceiling effect explains the missing mean increase most plausibly, since the participants entered with scores that already averaged 76.36 out of 100 and in some cases reached the full 100 at pretest, which left very little room to climb. The people in the trial were university students rather than actual TPPKS members and had most likely met group-dynamics concepts before, which makes a baseline this high anything but surprising.

These findings stay consistent with the theoretical framework behind the module because the measured constructs operationalize the social interdependence theory of Johnson and Johnson (2021) and the role-play enacted the contrast between positive and negative interdependence in a direct way. Scores did not rise and yet the thematic analysis shows that the module shifted and homogenized understanding of the core constructs, which signals the formation of a shared conceptual base that effective team collaboration needs as a prerequisite.

The practical lesson for putting Permendikbudristek No. 46 of 2023 into practice is that setting up a TPPKS will never be enough on its own and that the work has to include deliberate efforts to build positive interdependence and trust. Training of this sort lands harder when it draws on a more sensitive and more challenging instrument that sidesteps ceiling effects and when it stretches the dosage and repeats the Kolb cycle so that transfer into application can consolidate and when it reaches the actual team members whose baseline understanding tends to run lower and whose room to improve grows that much wider.

This study carries several limitations. The participants were students standing in as proxies with a high baseline and that ceiling limits both the ecological validity and the reach of any generalization to actual teams. A small sample of eleven together with a single-session intervention and a pre-experimental design that ran without a control group leaves the results open to maturation and testing threats, while the use of the same instrument at pretest and posttest may have introduced carryover effects and the declines on some items may reflect fatigue or thinner effort by the posttest. Future research should bring in actual TPPKS personnel and a larger sample alongside a controlled design and a validated instrument as well as measures of real collaborative behavior.

CONCLUSION

This study developed and pilot-tested a training module built on Kolb's experiential learning and grounded in social interdependence theory to strengthen team collaboration. Within a proxy sample whose initial scores already ran high the module did not raise mean understanding to any significant degree, with pretest and posttest means both at 76.36 and $t(10) = 0.000$ and $p = 1.000$ and $N\text{-gain} = 0.00$ in a result that a ceiling effect most likely produced. Score variability still dropped sharply and the NVivo-assisted thematic analysis showed that the module strengthened understanding of core constructs such as social interdependence and group goals and entitativity while revealing that a single short cycle never consolidated how participants apply those concepts to complex situations. We judge the module feasible and yet in need of refinement around instrument difficulty and training dosage, and it deserves testing with actual TPPKS members before any wider rollout. The module gives schools a replicable way to turn the structural mandate of Permendikbudristek No. 46 of 2023 into genuine collaborative practice.

REFERENCES

- Henríquez, V. V., Rabanal, I. C., & Abásolo, J. S. (2025). Applying Kolb's experiential learning cycle for deep learning: A systematic literature review. *Social Sciences & Humanities Open*, 12, 102096.
- Johnson, D. W., & Johnson, F. P. (2021). *Joining together: Group theory and group skills* (12th ed.).

- Pearson.
- Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia. (2023). *Permendikbudristek Nomor 46 Tahun 2023 tentang Pencegahan dan Penanganan Kekerasan di Satuan Pendidikan*.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.
- Komisi Perlindungan Anak Indonesia. (2024). *Bergerak serentak wujudkan perlindungan anak pada satuan pendidikan*. <https://www.kpai.go.id/publikasi/hardiknasbergerak-serentak-wujudkan-perlindungan-anak-pada-satuan-pendidikan>
- Rettew, D. C., & Pawlowski, S. (2016). Bullying. *Child and Adolescent Psychiatric Clinics of North America*, 25(2), 235–242.