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Analyzing Average Scores in Morality and Ethical Story Creation Tests: A Pre-and-Post Backward Design Evaluation Using T-Test in Educational Systems



Abstract: Fairy tales play a vital role in fostering early childhood development. Learning to create fairy tales, especially fairy tales that can promote morality and ethics for early childhood children, will result in appropriate and sustainable social development for children. As well as resulting in pre-service teachers learning meaningfully and valuably. Able to innovate on their own individual potential with a backward design learning model that encourages pre-service teachers and educators to know and understand common goals. This study aims to investigate the effectiveness of using a backward design learning approach to teach moral-ethical storytelling to pre-service teachers in early childhood education. Specifically, it seeks to compare the story-building skills of such pre-service teachers before and after the application of the aforementioned approach. The study sample comprises 36 second-year early childhood education students from the 2021 academic year. The literature and tales used in the study were selected via cluster random sampling. The research instruments employed included backward design learning plans and a morality-ethical storytelling test, with data analyzed through average and standard deviation statistics. The findings indicate that the backward design learning approach can develop the creation of moral and ethical tales for pre-service teachers and the students had higher ethical storytelling skills after the backward design learning management than before the experiment in all aspects. Develop learning skills that can be applied in real life And see the results that can be used in the future, along with cultivating early childhood children to grow up to be good citizens of society with quality.

Keywords: Moral Tales, Backward design Learning Management, Pre-service teachers, Early Childhood Education

1. INTRODUCTION

Developing people to build a solid life foundation in a world of change is a problem that education emphasizes. which should encourage and develop such things from early childhood Especially in society where there are many moral and ethical problems at present. Embracing children to have a good mind with appropriate learning management media, such as learning through a good story, is one way that can instill good global citizenship in the minds of children. so that children can travel in the right direction along with growing up to be good adults in the future, namely Social development through child development with moral stories Therefore, in the role of students who are early childhood teachers should realize the importance of such stories. If moral tales can be created from this small point, it will lead to the formation of a good image of society in the future as well. Which develops learners to become quality learners requires a clear understanding of the goals of their learning. In today's world, it is essential for learners to be able to apply their knowledge and skills to face the changes and challenges of society with intelligence and the desired characteristics that society needs. The National Education Plan (2017-2036) emphasizes the importance of developing learners and a

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skilled workforce that meets the needs of different sectors, rather than simply providing education based on the availability of educational institutions (Office of the Education Council, 2017: 66).

The learning goals must align with national educational standards, however, in the context of Thailand, include the three desired characteristics of prospective Thai people. Higher education learning attributes include lifelong learning, creating a career that benefits oneself, family, and society, persevering, having the ability to learn and acquire knowledge and life skills based on self-sufficiency, stability, and a good quality of life (Office of the Education Council, 2019: 5). This is based on a survey of the opinions of the younger generation towards modern education. In 2021, from the same source (2021: 12,15-16), it was found that students and young people who have just graduated have an opinion on the education system that they want to see teaching and learning that allows students to practice frameless analysis and creativity. There is a focus on developing the potential of the learner mainly with the characteristics of learning management that focuses on practice rather than theory. Learning fairy tales in education holds significant importance as it encompasses degaggical-psycological foundations and contributes to the formation of students' worldview and national-spiritual ethics. Tairy tales offer numerous benefits for young learners, both in terms of cognitive and socio-emotional development [1][13].

Modern education requires meaningful learning that focuses on developing the right knowledge, skills, and attributes to effectively apply knowledge to careers and lifestyles [1]. To achieve this, educational institutions must organize educational programs effectively, create a learning society, and improve the quality of production and teachers. Emphasis should be placed on learning management patterns that reflect learners' self-improvement and can be applied to changing social circumstances. This is in line with the emphasis on the new paradigm of learning in the 21st century that has influenced education management, especially with today's educational reforms. with the view that Each learner is different and each has its own identity. Therefore, curriculum arrangements and learning arrangements must be adjusted to take into account such characteristics. Rapid changes can create anxiety and insecurities in teachers, making it challenging to learn new strategies. As educational leaders, teachers must consciously accept to learn and solve problems that may arise from new theories (Waheed, A. et al. 2023). Education must learn about how to think outside the box and develop more. A teacher's job is not just to change the status quo but to bring about lasting change (Khanchai Athikat and Tanaruk Santeankeaw, 2017: 1[2]. Developing ethical capability among community development students and parcitioners is crucial as it not onlu strengthens their ability to make ethical decisions but also derectly contributes to their effectiveness and overall well-being in their work (Agisibaou and Harris, 2022)[3].

Learning management in higher education institutions to develop learners to have competencies and characteristics that are in line with the needs of the curriculum that encourage students to truly learn knowledge, skills and attitudes that can be put into practice as well as in accordance with the learning in the 21 century [4]. There are many ways. Backward design learning management is an appropriate form of active learning management that suitable for today's volatile, rapid and uncertain changes It is a new learning system proposal derived from a study on the design of a learning system transformation policy that Responds to future Global Changes in 2040 of the Office of the Education Council (2021: 25). Backward Design encourages both instructors and learners to clearly realize the learning goals of what they teach and learn. This approach focuses on educating the learner and starts with determining the expected learning outcomes from the learning standards or course descriptions of the course (Beaumier and Koole, 2023). The next step involves defining the learning evidence relative to that learning outcome to determine the purpose of learning (Tanveer et al 2020). This is followed by designing learning management plans, learning, and evaluation, which is the next last order. Therefore, backward design learning management is a learning management sequence that backward designs from the usual design but provides efficiency and effectiveness to the learner (Chalerm Fak-on, 2009: 22-25; Chanchai Athikat and Tanaruk Santeankeaw, 2017: 15; Kalyarat Theppabut, 2018: 28).[2]

The 3-Step Process of Backward Design Learning Management, as per Wiggins, G., & McTighe, J. (2011) [5] and Wichai Wongyai (2009)[6], includes 1) desired outcomes, 2) evidence, and 3) learning management plans. This process involves designing measurement and evaluation, as well as teaching activities in stages, concise, and experienced in accordance with learning objectives, measurement, and evaluation. The hallmark of backward design learning management is the teaching design that adopts Desired outcomes, which recognizes that knowing the clear goals of learning is the basis for success (Khan et al. 2022).

Wiggins, G., & McTighe, J. (1998)[3], cited in Wichai Wongyai (2009)[6], developed a backward learning management model that shows the learning management process starting from setting the desired learning goals to learners. This model consists of three stages: 1) determining the knowledge, ability, or outcome of the learning that the learner wants, 2) determining the behavior or evidence that the learner has achieved the desired learning outcome, and 3) designing learning activities and measurement and evaluation in accordance with learning objectives.

Step 1: Define knowledge by identifying the desired learning outcomes based on learning standards or curriculum descriptions. It is essential to consider learners' existing knowledge and skills to determine the valuable knowledge and abilities they need to acquire. Additionally, determining the lasting impact of learning is crucial in defining the knowledge and abilities that must exist with the learners.

Step 2: Define behaviors or evidence that indicate a learner has achieved the specified learning outcomes. This step involves using concrete indicators of learning success, which is based on the expected learning outcomes. By identifying specific behaviors that can be measured and evaluated, it is possible to determine if a learner is competent. It is important to apply different knowledge or methods depending on the situation and to connect important issues or solve problems with reason to achieve a learner's own knowledge and understanding.

Step 3: Design learning activities and assessment methods that align with the learning objectives. This involves determining appropriate measurement methods, designing assessments, and selecting instruments that match the learning objectives. The most effective assessment method is the authentic assessment, which should be carried out continuously to manage learning effectively.

These three steps of backward design learning can be visually represented as a chart below.

Diagram 1 shows the backward design learning management sequence (adjusted from Jennifer Gonzalez, 2020).

The management of early childhood education is focused on developing learners who can achieve learning competencies, become effective kindergarten teachers, have a positive attitude towards themselves and others, and apply knowledge effectively. Beyond operational skills, expertise in academics and sciences related to early childhood is essential. One important aspect of learning science is literacy learning and fairy tales, which can help learners maximize benefits for early childhood development (Li & M.S, 2023) . Fairy tales can teach appropriate behavior, instill discipline and integrity, and promote emotional, psychological, social, and intellectual growth. Therefore, pre-service teachers majoring in early childhood education must learn to choose and tell good stories, compose stories, and use storytelling activities appropriately. This knowledge of storytelling is vital to preparing early childhood children to become good people and create a happy society. Knowledge of storytelling is therefore an important knowledge and challenge in the learning process to result in storytelling and applied effectively in accordance with the learning outcomes in the subjects according to the curriculum

As such, researcher therefore is interested in studying and researching Creating Moral and Ethical Tales of Pre-service Teachers of Early Childhood Education Programme By using Backward Design,the research aims to promote the learners' competencies as prescribed by the curriculum and desirable characteristics of the Bachelor of Education program. These characteristics aim to develop graduates who can integrate knowledge and skills into early childhood education management with quality and awareness of the changing world (Jieru & Khan, 2024).

2. RESEARCH OBJECTIVES

1 . To study the creation of moral and ethical tales of pre-service teachers majoring in early childhood education at Suan Sunandha Rajabhat University before and after the implementation of backward design learning management;

2. to compare the moral and ethical storytelling skills of pre-service teachers majoring in early childhood education at Suan Sunandha Rajabhat University before and after the implementation of backward design learning management.

3. RESEARCH METHODOLOGY

Incorporating components of semi-experimental, quasi-experimental, and a one-group pretest-posttest design, this study uses a mixed methods research methodology. Qualified experts were involved in the development and testing of the research tools to guarantee their validity and dependability. Five professionals with advanced degrees in educational research instruction and expertise in measuring and evaluating studies were hired by the research team. These professionals evaluated the accuracy of the research's findings before putting the instruments through an iterative procedure to increase their validity and reliability. There are research methodologies as follows:

3.1. Population and sample group

The population used in this research was second-year students majoring in Early Childhood Education, , Faculty of Education, Suan Sunandha Rajabhat University, Thailand.

The sample group used in this research consisted of 36 students in the second year of early childhood education, 2nd semester of the academic year 2021, there were 2 classes, class A and class A, then the researcher randomly selected class A.

3.2. Research tools

The research tools used for data collection include a learning plan using backward design learning management and a moral and ethical storytelling test. The quality of the tools has been developed and determined as follows:

3.2.1 Learning plans using backward design learning management.

There is a process of creating and finding the quality of the tool as follows:

3.2.1.1 study relevant documents related to backward design learning, which consisted of three learning steps: 1) determine learning outcomes, 2) determine evidence of learning outcomes, and 3) determine learning outcomes. Design learning activities and measurement and evaluation

3.2.1.2 Create a backward design learning management plan that contains content related to creating moral and ethical tales.

3.2.1.3 Apply the created learning plan to experts to check suitability. Using the 5-level rating scale, the assessment criteria are based on the average of suitability from the most, very, medium, few, and least respectively, with the highest appropriateness values ($\bar{x} = 4.90$, S.D. = 0.27)

3.2.1.4 Apply the learning plan according to the recommendations of experts and prepare a complete learning plan

3.2.1.5 Apply the learning plan to the target group.

3.2.2 The moral and ethical storytelling test

The moral and ethical storytelling test has a total score of 25 points, consisting of 2 sets: 1) 4 choice multiple-choice test with 10 questions, 1 point each, totaling 10 points, and 2) The subjective test for creating moral and ethical tales has 5 aspects, 3 points each, totaling 15 points, as follows:

3.2.2.1 Multiple-choice quiz; The process of creating the tool is as follows:

3.2.2.1.1 Study the document research related to the creation of a selective exam creating fairy tales and other related documents

3.2.2.1.2 Analyze the consistency of the content according to the objectives of the research.

3.2.2.1.3 Create a quiz with 10 multiple-choice questions based on storytelling content, each worth 1 point, for a total of 10 points.

3.2.2.2 Subjective test; The process of creating the tool is as follows:

3.2.2.2.1 Study the document. Research related to the creation of moral and ethical tales from learning sources and related documents.

3.2.2.2.2 Create a moral and ethical storytelling test that covers 5 aspects: writing objectives, the core of the story, the storyline, engaging storytelling, and appropriate character development. Each aspect is worth 3 points, for a total of 15 points.

3.2.2.2.3 Create individual scoring criteria for the rubric as follows:

1) Writing Objectives

3 points: Clear and fully consistent with the subject.

2 points: Clear and partially consistent with the subject.

1 point: Unclear and/or inconsistent with the subject.

- 2) The Core of the Story
 - 3 points: Clear,comprehensive,and fully aligned with the objective.
 - 2 points: Clear,comprehensive,and partially aligned with the objective.
 - 1 point: Unclear and/or inconsistent with the objective.
- 3) Storyline
 - 3 points: Includes an interesting event and clearly defines the key episode that serves as the climax of the story.
 - 2 points: Includes interesting events but does not clearly define the key episode that serves as the climax of the story.
 - 1 point: Includes some interesting events but does not provide a clear definition.
- 4) Interesting action
 - 3 points: Clearly define the milestones that lead to the core of the story.
 - 2 points: Define the milestones that lead to the core of the story clearly.
 - 1 point: No major events lead to the core of the story.
- 5) Appropriate Character Development
 - 3 points: Not too many character assignments. Use the protagonist to carry the story. Have a clear habit.
 - 2 points: Not assigning too many characters and or having ambiguous roles or habits.
 - 1 point: Over-defining characters and or roles and ambiguous habits.

3.2.2.3 Criteria for Evaluating Moral and Ethical Story Creation Skills:

The following criteria are used to evaluate the quality of moral and ethical stories created:

A score between 21 and 25 indicates the highest level of quality for the story.

A score between 18 and 20 indicates a very high level of quality for the story.

A score between 15 and 17 indicates moderate quality for a fairy tale.

A score between 12 and 14 indicates that the story has low quality.

A score below 12 indicates the lowest level of quality for the story.

The researchers analyzed the data using descriptive statistics such as mean and standard deviation. The following performance assessment criteria are used to evaluate the overall quality of the story:

- An average score of 4.50 – 5.00 indicates that the story is of very good quality.
- An average score of 3.50 – 4.49 indicates that the story is of good quality.
- An average score of 2.50 – 3.49 indicates that the story is of moderate quality.
- An average score of 1.50 – 2.49 indicates that the story is of sufficient quality.
- An average score of 1.00 – 1.49 indicates that the story has improved in quality.

3.2.2.4 Review of Morality and Ethics Storytelling Test:

The morality and ethics storytelling test is reviewed by three experts to assess content fidelity and improve the text based on a defined set of terminology. All the text must have a consistency index value between 0.67 and 1.00.

3.2.2.5 Reliability Assessment of Morality and Ethics Storytelling Test:

The reliability of the morality and ethics storytelling test is assessed by conducting an experiment with non-targeted first-year students to establish confidence in the instrument. The Cronbach alpha coefficient method is used for this purpose.

3.2.2.6 Conducting the Morality and Ethics Story Creation Test:

To conduct the morality and ethics story creation test, expert recommendations were incorporated to create a comprehensive assessment tailored to the target audience. The statistical data obtained from the assessment was analyzed to further refine the test and for data analysis.

4. Data Collection

In this study, data collection was carried out during the 2021 academic year, following the sequences outlined below:

1. The researchers evaluated participants' abilities to create moral ethical tales using the ethical morality story creation test developed by the researchers. This test underwent expert quality checks prior to experimentation.
2. Backward design learning management trials were conducted with pre-service teachers based on a learning plan developed by the researchers. Over a period of 7 weeks during semester 2 of the academic year 2021, the following three steps were followed: a. Clarifying the desired learning outcomes b. Providing empirical evidence and evaluation c. Engaging in consistent learning activities.
3. After 7 weeks of trial, the researchers assessed the participants' moral ethical story creation skills using the same ethical morality story creation test as before the experiment.
4. The scores obtained by evaluating moral ethical story building skills using quizzes were analyzed to obtain statistical data.

5. Data Analysis

The researchers analyzed the data with a ready-made program using statistics to analyze the data. The mean and standard deviation were calculated to summarize the data.

6. Research Results

The study found that backward design learning management can improve the creation of moral ethical tales among early childhood education students in the faculty of education. The mean score was $\bar{X} = 20.92$ with a standard deviation of 1.67, indicating good results. Students demonstrated higher moral and ethical story building skills after participating in the backward design learning management approach compared to before the experiment. The results are presented in two parts:

Part 1: Average score comparison of morality tale creation before and after backward design learning management.

Part 2: Average score comparison of moral ethical tale creation before and after backward design learning management.

Details of the results are as follows:

Part 1: Average score comparison of morality tale creation before and after backward design learning management

Table 1 Average Scores of Morality and Ethical Story Creation Tests Before and After Backward Design Learning Management Approach

Test	Number of Students	\bar{x} Full score 25	Interpretation Quality level	S.D.	T-test
Before (Before trial)	36	13.44	Fair quality	2.19	- 34.54**
After (After trial)	36	20.92	Good quality	1.67	

** *It is statistically significant at 0.05*

Table 1 indicates that the use of backward design learning management resulted in higher moral ethical story creation scores for students compared to their scores before the class. The t-test is used for the same. The t-test is a statistical method used to determine if the means of two groups are significantly different. The formula for a two-sample t-test is as follows:

$$t = (X1 - X2) / \sqrt{(s^2_1/n_1 + s^2_2/n_2)}$$

Where:

t is the t-statistic,

X1 and *X2* are the sample means of the two groups,

s²1 and *s²2* are the sample variances of the two groups, *n₁* and *n₂* are the sample sizes of the two groups.

The t-statistic quantifies the difference in means relative to the variability in the data. A larger t-value suggests a more significant difference between the groups. The critical value from the t-distribution is used to determine the statistical significance of the result.

The average post-study score of 20.92 reflects good quality, with a standard deviation of 1.67. In contrast, the pre-study score average of 13.44 had a fair quality, with a higher standard deviation of 2.19.

Part 2: Average score comparison of moral ethical tale creation before and after backward design learning management.

Table 2 Detailed Summary of the Average Scores of Creating Moral Ethical Tales on a Side-by-Side Basis Before and After Backward Design Learning Management Experiments

objectives	theme		plot		The action is interesting		Assignment character			
	after	Before	after	before	after	Before	After	before	After	
Mean \bar{x} =	3.30	4.75	2.83	4.22	2.72	4.05	2.05	3.67	2.39	4.22
Std. Deviation	0.52	0.44	0.69	0.42	0.60	0.33	0.58	0.53	0.59	0.54
Quality values, creation of morality, ethics fairy tales	moderate	Very good	moderate	good	Fair	good	good	good	moderate	good

Table 2 shows that the average score for the creation of moral ethical tales on all sides was higher after the backward design learning management experiment. The results obtained were very good, with higher levels of performance than before the trial. The average scores were classified as good, moderate, and fair, with the objective writing category having the highest average score of 4.75 after the trial. This was an improvement from the moderate average score of 3.30 before the experiment. The storyline category also had a good post-trial average score of 4.05, which was higher than the moderate average score of 2.72 before the trial. In contrast, the category of action interesting had the lowest average post-trial score of 3.67, which was still good and higher than the fair average score of 2.05 before the trial. The category of objective writing showed the greatest improvement, with the highest increase in average score after the backward design learning management experiment.

7. Discussion and Conclusion

Based on the findings of the study on the creation of moral ethical tales among students and teachers in early childhood education, Faculty of Education, through the implementation of backward design learning management, it was revealed that this approach can significantly enhance students' ability to create high-quality moral ethical stories compared to their performance before the classes. Moreover, the students attained a higher average score in all areas of moral ethical tale creation after the trial than before.

The findings are analyzed in accordance with the research objectives as outlined below:

7.1 Backward design learning management can improve the creation of moral and ethical tales of students.

The study found that the average score on the test for creating moral and ethical tales was higher after the trial compared to before the trial. Specifically, the average score after class was 13.44, which is considered moderate, with a standard deviation of 2.20. This is 1.70 points higher than the average score before class. This improvement may be attributed to the use of backward design learning management, which is a learning process that focuses on clear learning outcomes and comprehensive management of learning objectives. This includes designing learning activities and evaluating criteria to ensure quality story pieces are developed, starting from easy to difficult content. Teachers also use open questioning, such as inquiring about the type of stories students like to listen to, to analyze students and encourage them to achieve their goals. This accession is also supported by Whitehouse (2014)[7] which suggested that it is important for teachers to use high-quality evidence-based questions and specimens of learning when adopting a backward design learning management approach. It reflects the design of learning management to develop learners to have desirable learning outcomes. in addition, Promoting diverse and interesting learning management with the same goal is aimed at ensuring that students achieve durable learning outcomes that are understood through analyzing, synthesizing, and taking hands-on action to create their own ethical morality fairy tales successfully. Backward design learning management can be displayed in class as follows:

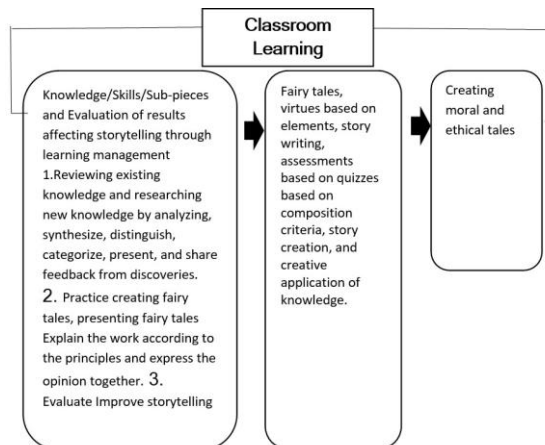


Diagram 2 shows classroom learning management that uses backward design learning management to create moral tales.

Backward design learning management is a process in which learners take ownership of their learning and develop higher-level skills through a student-centered approach, learning from hands-on experience. Data from analysis and synthesis is linked to real understanding. can be rationally explained Apply it and create your own knowledge. By starting with clear learning goals, learners can create representative pieces that reflect their understanding of the material. This approach focuses on encouraging students to develop their own learning methods, resulting in a higher level of engagement and motivation. This is in line with the concept of Heather L. Reynolds & Katherine Dowell Kearns.

In a study by Heather L. Reynolds and Katherine Dowell Kearns (2016)[8], backward design was found to be a simple and rational approach to student-centered learning. Instructors act as facilitators, guiding students to develop their own real learning methods. This approach has been shown to help students develop moral and ethical storytelling skills. It is a learning atmosphere that takes into account the potential of the learners. It is a positive atmosphere resulting in good intentions that push the work towards achieving the goals., as demonstrated by the results of a Moral Ethical Storytelling Test conducted by Akkarin Thongkaw (2018)[9]. Thongkaw's research examined the development of a collaborative learning model that used backward design activities to promote critical thinking among undergraduate students. The study found that learners who studied with this model had statistically significantly higher critical thinking skills after the study than before, with a high level of learner satisfaction.

7.2. Students have higher skills in creating moral ethical tales after backward design learning management than before all trials, with the highest average areas including: Objective writing is characterized by high-quality standards, but there are certain areas that could benefit from improvement. Specifically, conducting engaging and meaningful discussions on a regular basis is a challenge, which may be due in part to the fact that students have undergone a backward design learning management process, which emphasizes clear learning outcomes. To enhance the quality of discussions, it is essential to foster critical and synthetic thinking, practice sound reasoning, and take decisive action. Additionally, instructors should provide feedback and assessments that align with clearly defined criteria for evaluating the quality of student work. This will enable students to make more comprehensive and high-quality adjustments to their storytelling, in accordance with Whitehouse's (2014)[7] concept of backward design learning management. Assessments are integral to the planning process for backward design learning management and are known to encourage participants to share their perspectives. A practical approach to developing learners' understanding is to encourage them to create stories that range from simple outlines to complex fairy tales that reflect shared experiences and insights gained through group discussions with peers and instructors.

According to Wiggins and McTighe (1998) [5], backward design learning management can be used as a guide by learners to enhance their own learning. This is particularly evident in the creation of tales, where learners can develop their skills in a given subject by creating stories that range from fair to moderate quality, and eventually to good quality. Through this process, students can monitor their own learning, leading to better self-improvement and durable cognition. Backward design learning management can help learners effectively follow the learning outcomes of a subject by adapting and seeking ways to improve their work in accordance with the expected standards. This is consistent with Bowen's (2017)[10] view that backward design learning is the most effective way to achieve specific learning outcomes, and also conform to Wichai Wongyai (2009)[6] that defined backward design learning as a learning management plan that focuses on deeply embedding cognition by determining desired behaviors and learning objectives, designing teaching activities, and evaluating learning outcomes.

According to research, desirable behaviors can be determined and used to guide the determination of learning objectives, design, measurement, and evaluation of teaching activities. Preeyada Phattarasatjatam and Kanchana Phromreungrit (2018)[11][14] conducted a study on the effectiveness of backward design teaching design in enhancing learning outcomes in accordance with the National Higher Education Qualification Standard Framework of Nursing Students. The results showed that after using the higher backward design teaching design method, the learning outcome scores of nursing students in accordance with the framework were significantly higher than before classes ($P < .05$). The overall average score was 4.04, indicating a very high level of learning outcomes. In particular, interpersonal and responsibility skills had the highest average score of 4.52. These findings are consistent with Kirit Thanaworn and Intira Robroo's (2020)[12] synthesis of research related to backward design design, which found that studies involving backward design design and backward design design objectives were consistent and in the same direction.

To ensure desirable outcomes and guide the determination of learning objectives, the design, measurement, and evaluation of teaching activities should be research-based and aligned with learning standards. Backward design design is a learning process that uses learning standards as a goal to provide effective teaching and learning. Teachers are required to define learning evidence that demonstrates students' achievement of learning outcomes in a specific subject. They must also design a variety of activities in accordance with the workload, workpiece, or evidence of learning defined.

8. Summary

Backward design learning management is an instructional design approach that focuses on the end goal of learning outcomes to create a comprehensive and effective learning process. It places emphasis on students' active participation in demonstrating their performance in a meaningful and valuable manner. The goal is to develop students to become quality learners who can apply their knowledge and skills to real-world situations. And it is suitable for learning management in today's dynamically changing era.

The key aspect of backward design is to start with identifying the core goals or results of what needs to be studied, which aligns with the standards of the curriculum. By doing so, instructors can create directed empirical evidence to verify compliance with learning outcomes or goals. The next step is to design learning management that enables students to achieve a full understanding of the goal. This approach ensures that instructors and students have clear goals that are aligned with the learning outcomes, even with limited time. This approach is cost-effective and ensures that time is not wasted.

Creating a step-by-step lesson plan in conjunction with proper evaluation, As a result, the learners were able to create good quality moral tales by themselves, resulting in new innovations that directly benefited the children who listened to the tales. It is the development of people through stories with a small beginning. Cultivate and grow to become a quality citizen of society. Students and teachers will be able to apply the skills learned in the Backward design method to effectively apply them in other contexts. By focusing on the end goal of learning outcomes (a clear common goal), backward design encourages students to take ownership of their learning and to participate actively in the learning process.

Backward design helps instructors to create an effective teaching and learning process that prepares students to become quality learners. The approach also promotes critical thinking, problem-solving skills, and the ability to apply knowledge in practical situations. With backward design, students are not just learning for the sake of learning but are developing skills and knowledge that they can use in the future. In conclusion, backward design is a highly effective instructional design approach that enables students to take control of their learning and prepares them to become successful learners in the long run.

9. Recommendations and implementation of findings

9.1. Instructors should dedicate more time to experimenting with teaching methods that can result in better quality learning outcomes in all areas. Since fairy tales are important and essential teaching materials for early childhood, it is crucial to use effective instructional techniques that can help children grasp the key concepts in these stories.

9.2. During the experiment, instructors should focus on evaluating the learner's sub-performance compared to the evaluation criteria. This approach can provide opportunities for the development and improvement of work on various issues, making the learning process complete and more effective.

9.3. The use of backward design learning management can be an effective way to manage learning in both online and classroom settings, especially in cases where there is no emphasis on real-world practice. Instructors can design interesting activities through various software to engage students in activities, particularly those that emphasize principles and reasoning.

10. Recommendations for Future Research:

10.1. Future research should involve experimenting with more than one combination of teaching methods to encourage students to create work that aligns with the learning outcomes in the course. This can provide insights into the most effective instructional techniques for teaching fairy tales to early childhood learners.

10.2. Research should be conducted to explore the relationship between students' social interactions with friends and their interactions with instructors in the context of backward design learning management. This can help instructors identify ways to improve student engagement and academic performance.

10.3. Future research should also compare the outcomes of backward design learning management with other methods of learning management to determine which approach is more effective in helping students achieve academic success. This can be achieved by collecting both quantitative and qualitative data using advanced statistical techniques to gain deeper insights into the learning process.

References

1. Bagga, T. (2017). Accreditation compulsion or inducement: A perception study of various stakeholders. Prabandhan: Indian Journal of Management, 10(12), 7-19.
2. Fak-on, C. (2009). Design management learned by technique Backward Design. : According to the Core Course, Basic Education Buddhist Era 2008. Srinakharinwirot Prasarnmit University.
3. Agisilaou, V. H. and Harris, H. (2022). Learning to be ethical: the role of ethical capability in community development education, Community Development Journal, 58(1), 154-172.
4. Faculty of Education, Suan Sunandha Rajabhat University. (2019). Bachelor of Education

Program in Early Childhood Education Revised Program 2019. (n.p.)

5. Wiggins, G., & McTighe, J. (2011). *The Understanding by Design guide to creating high-quality units*. Alexandria, VA: ASCD. <https://files.ascd.org/staticfiles/ascd/pdf/siteASCD/WhitePaper0312.pdf>.
6. Wongyai, W. (2009). Backward design learning design. *Teacher Professional Encyclopedia Commemoration of the King His Majesty the King celebrates his 80th birthday*.
7. Whitehouse, M. (2014). Using a backward design approach to embed assessment in teaching. *The School science review* · 95(352). [https://www.physics.smu.edu/sdalley/quarknet/2015/2015 QuarkNet_files](https://www.physics.smu.edu/sdalley/quarknet/2015/2015%20QuarkNet_files).
8. Reynolds, H. L. & Kearns, K. D. (2016). A Planning Tool for Incorporating Backward Design, Active Learning, and Authentic Assessment in the College Classroom. *College Teaching*. 65, 2017 – Issue1. <https://www.tandfonline.com>.
9. Thongkaw, A. (2018). Developing a Collaborative Learning Model of Backward Design Activities for Improving Critical Thinking Undergraduate Students through Social etwork. Rajabhat MahaSarakham University.
10. Bowen, RS. (2017). *Understanding by Design*. Vanderbilt University Center for Teaching. Retrieved from :<https://cft.vanderbilt.edu/understanding-by-design/>.
11. Phattarasatjatam, P. and Phromreungrit, K. (2018). The Effectiveness of Using Backward Design for Developing Learning Outcomes according to Thai Qualifications Framework for Higher Education among Nursing Students. *Journal of Nursing and Education*. 11(3), 64-78.
12. Thanaworn, K. and Robroo, I. (2020). Synthesis of research on backward design. *Karu Sima Journal*, 3(1), 50-60.
13. Bagga, T., Bansal, S., Kumar, P., & Jain, S. (2016). New wave of accreditation in Indian higher education: Comparison of accreditation bodies for management programmes. *Prabandhan: Indian Journal of Management*, 9(8), 26-40.
14. Saxena, M., Bagga, T., Gupta, S., & Kaushik, N. (2022). Exploring common method variance in analytics research in the Indian context: A comparative study with known techniques. *FIIB Business Review*, 23197145221099098.
15. Ahmed, Tanveer et al. (2020) 'Impact of Employees Engagement and Knowledge Sharing on Organizational Performance: Study of HR Challenges in COVID-19 Pandemic'. 1 Jan. 2020: 589 – 601.
16. Khan, Muhammad Shahid (2022) Encouraging Pro-environmental behavior in University Employees: An approach toward environmental sustainability as moderated by green organizational culture - khan - 2022 - journal of community psychology - wiley online library.
17. Li, Y., & Khan, M. S. (2023). Impact of Perceived Organizational Support on Turnover Intention in Luxury Hotels: The Mediating Role of the Perceived Value of Artificial Intelligence. *Vision*, 0(0). <https://doi.org/10.1177/09722629231180435>
18. Quan, Jieru and Khan, Muhammad Shahid (2024) 'The Mediating Role of Job Satisfaction and Competitive Advantage Between Quality Management Practices and Sustainable Performance: Case of Hospitals in Guangxi, China'. 1 Jan. 2024 : 1 – 18.
19. Waheed, A. et al. (2023) 'Environmental policy vs. environmental innovation: An examination of policies disclosure on Sustainable Development from stakeholder theory perspective', *Sustainable Development*, 32(3), pp. 2506–2516. doi:10.1002/sd.2782.