

Teaching Styles of using English Drama in Critical Thinking Course for Architecture Students in Qassim University

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Abstract

Teaching Critical thinking course to large groups places a number of demands on the teacher. When integrating English drama in Critical Thinking course, there is a fairly high level of conversational noise in the logic and evaluation of arguments, fallacies and methods, logic, deductive, as well as everyday applications in communication media. This enables them to use space to express themselves and work at different paces towards different goals. This research paper aims to develop students' language skills in expressing themselves through arguments and reasoning – not produce actors. For this reason, carefully structure of lessons so that they have clear linguistic and skills-development aims, and to communicate these aims clearly to students so that are clear on what is expected of them.

Keywords: *Classroom techniques, critical thinking, English drama, teaching styles, teaching strategies*

1. Introduction

Critical thinking is a cognitive strategy to think clearly and rationally. It includes the ability to engage in reflective and independent thinking. Someone with critical thinking skills is able to understand the logical connections between ideas, identify, construct and evaluate arguments, detect inconsistencies and common mistakes in reasoning, solve problems systematically, identify the relevance and importance of ideas and reflect on the justification of one's own beliefs and values.

Critical thinking skills through Socratic Method taught in schools help creates leaders. Instructors that promote critical thinking skills can benefit the students by increasing their confidence and creating a repeatable thought process to question and confidently approach a solution. Students also accomplish follower-ship skills that can be used to probe the leader's foundations [1]. Critical thinking skills through Socratic Method serve to produce professionals that are self-governing. However, Socratic methods for critical thinking skills can become confusing if an instructor or leader uses the method too rigidly, the student may not know what the instructor or leader wants from him. An instructor or leader may disillusion the students if he uses particular style of questioning. Instructors must reveal their reasoning behind the questions in order to guide the students in the right direction. Socratic methods can serve twenty-first-century leaders to instruct students, mentor protégés, motivate followers, advise other leaders, and influence peers [1].

The Bachelor of Architecture degree course in Qassim University is a 4 year course consisting of 139 credit-hours. The educational system in the college is based on two main semesters per educational year. Each semester is fifteen (15) week length. In

addition; an optional eight week summer semester may be offered. An architecture student may complete any of the engineering programs in 8 semesters after the Preparatory Year Program (PYP). A successful architecture student may complete the full requirements of the selected program if he completed (after the PYP) a total of 139 credit-hours [2, 3].

One of the basic courses in Architecture is Critical Thinking, a 3-unit subject offered in level 1 of fall semester. Critical Thinking is the capstone course in basic architecture since it integrates almost all the knowledge a student has learned in 4 years of high school education. This course has traditionally been delivered through classroom multimedia instruction to architecture students. One semester learning period is insufficient to fully discuss all the topics for this course.

This paper presents strategies and styles in the adoption of English drama in critical thinking course. Drama provides an excellent platform for exploring theoretical and practical aspects of the English language [4]. The improvisation aspect of drama gives students opportunities for developing their communicative skills in authentic and dynamic situations. By using drama in the English classroom, critical thinking course can be used with students in intriguing and useful ways. The language can be used in context and makes it come to life. Drama has the potential of making the learning experience fun for the students and even memorable because it is interactive and visual. There are many studies about using drama to be good in arguments and reasoning. Moreover, drama helps to learn new vocabulary, builds confidence, motivates the students and helps shift the focus from the teacher to the students [5]. Drama is a special communication situation which makes considerable demands on the flexibility and skills of the teacher [6].

2. Benefits of Using Drama in Critical Thinking Course

Drama puts the teacher in the role of supporter in the learning process and the students can take more responsibility for their own learning. Ideally, the teacher will take a less dominant role in the language class and let the students explore the language activities. In the student centered classroom, every student is a potential teacher for the group.

Drama for second language learners can provide an opportunity to develop the imagination of the students. The students provides an opportunity for independent thinking and encouraged them to express their own ideas and contribute to the whole [7, 9]. Creative drama offer exercises in critical thinking and the chance for the students to be creative. A good example of this is role-plays in small groups. The critical thinking group will have many situations where they can develop their own ideas as well as skills of cooperation when interacting with classmates. The group work builds social awareness and understanding as we walk in the 'shoes of another'. Drama gives an excellent method for studying human nature and working in harmony. The play acting provides the opportunity for a healthy release of emotion in a safe setting which can work to relieve the tension of learning in a second language.

2.1. Drama as a Powerful Teaching Tool

In the Critical thinking course classroom, role-playing is a powerful tool. It teaches cooperation, empathy for others, decision making skills and encourages an exchange of knowledge between the students [10]. These aspects alone make role-playing beneficial because the students are learning from each other. Yet, there are many other positive

aspects to the role-playing. Apart from the obvious development of communication skills, it encourages leadership, team work, compromise, authentic listening skills and practice with real life savoir-faire. However, it does not stop there. It teaches cooperation, empathy, develops decision making skills, promotes the exchange of knowledge, builds confidence and self-esteem, refines presentation skills, encourages self-acceptance and acceptance of others, features of empowerment, pride in work, responsibility, problem solving, management and organizational skills, begets creativity and imagination.

A good drama teacher can use the practice with role-playing to contribute to the self-esteem of the students, build their confidence in using the target language (English) as well as develop many of the skills mentioned above which will carry over to real life. It is certain that self-acceptance can be encouraged in subtle ways and acceptance of others.

Drama has the potential to empower the students, give them many opportunities to have pride in their work, it teaches them responsibility, problem solving, management and directing proficiencies. The many activities of team work force students to develop organizational skills and to think on their feet. These are tools that can be used in all aspects of their lives. These skills will be useful in the future job market when the students need to work with others or even in the future job interview when the potential employer asks an unexpected question and you need to think quickly.

2.2. Reflections on Improvisations of Drama

Improvisation, then, is an organic experience where skills are constantly being refined. In particular, students develop an increasing facility to meet changing or unknown stimuli with immediate responses. Ideally, improvisation leads to a blending; the students create the personality traits as he/she simultaneously identifies with the character as it evolves. Obviously, the teacher-director should never lose sight of the metamorphic and highly personal nature of improvisation; therefore, there must never be the question of success or failure [7, 9].

Drama in its purest form gives the student several avenues to self-awareness. It is one of the closest literary forms to life itself. It is a dynamic process that reveals and examines aspects of the complicated lives lead [8, 10]. All of this leads to believe that there are many subtle benefits to drama in the English classroom.

The benefits of drama to develop the imagination should not be undervalued. In our rote school routines of memorization and compulsory subject matter, sometimes teachers do not spend enough time on encouraging students to use their imagination. It is the spark that makes the ordinary into something incredible. Imagination is the magic force that is beyond facts, Figures and techniques which can inspire new ideas. It is with imagination that the ordinary is transformed into something significant. There is a need to cultivate this trait to students. Imagination is closely linked to dreams and inspires student to get up every morning [11]. Drama has the capability to keep this alive and/or rekindle what student routine daily lives are burying in themselves. Students need imagination to make a better world. In order to accomplish anything worthwhile, students first need to imagine and dream it [12, 13, 16]. Students should not neglect this facet of human sentience. It may seem like a trivial point, but dreams without imagination would be like life without color.

3. Critical Thinking Course

Critical thinking course is a carefully planned and organized effort to accomplish a specific one-time objective. The purpose of this course is to develop thinking skills. People live in a society that mass-produces information. Not all of it is true or well-grounded in fact [14]. The key challenge in an information age is to know how to judge the quality of the information, opinions, and arguments that people are exposed to on a daily basis. This includes the ideas, arguments and assertions that people see, hear or read in the news, in coursework, on the job and in all human relations. Critical thinking is a fundamental leadership competency. Leaders are often presented with information from a variety of sources and about areas where they have no expertise. They must know how to make good judgments about people, information, and arguments. Leaders also have to know how to present persuasive arguments. Some people become leaders because of their personality, desire, or “people skills” [15, 17]. Others become leaders because of their ideas and ability to create a vision, plan for the future, and anticipate and solve problems. Critical thinking is the foundational skill for the College of Architecture in Qassim University curriculum. It is not an end in itself, but a first step towards creative thinking and problem solving. In Qassim University under the College of Architecture, Critical Thinking course focuses the following areas of study: an introduction: concepts and proposal, the language and its uses; the truth and verification, definitions, identifying arguments: the evidence and conclusions, the logic and evaluation of arguments, fallacies and methods, logic, deductive, as well as everyday applications in communication media. The ability to think critically and solve problems is not only important for leadership, but for a life-long learning.

Table 1 shows the coverage and requirements for the course. The total number of hours needed to finish the course syllabus is 53 hours for the whole semester. This does not include the times when faculty members are not able to attend their class because they participate in faculty development activities such as seminars and conferences [2, 18].

One of the major course requirements in Critical Thinking course is English drama. The class is divided into groups of six members and each group is assigned to prepare an English drama with application of argumentation and reasoning in relationship with the course outline discussed.

As shown in Figure 1, a timetable of activities is prepared for this purpose where parts of the project are submitted at specific deadlines and graded in accordance with design criteria for presentation. At the end of the semester the complete case study final report is submitted. The Project constitutes 10% of the final grade. The preparation of the project is done outside class hours and entails a significant amount of team effort on calculations and data collection

Table 1. Course Outline and Course Requirements of Critical Thinking

PART 1		PART 2	
Critical Thinking 1	No. of hours	Critical Thinking 2	No. of hours
Orientation Lecture Series: Learning to learn (Developing Critical Thinking Skills)	2	Drama Education in Critical Thinking course: Motivation, Meaning in the context, Learning styles and Multiple intelligences	2
Introduction to Critical Thinking: Convinced, Claims and Arguments.	2	Drama Education in Critical Thinking course: Affective filter and Psychological	2

			benefits	
Vague Sentences: Too vague and Ambiguous sentences	2		Methods and techniques of Drama Education used in English Language Teaching	2
Quiz No. 1 Subjective and Objective Claims	2		Project Workshops	10
Prescriptive and Descriptive Claims, and Definitions	2			
First Midterm Exam	2		Drama Presentation	12
Good Reason to believe: Good Argument, Plausible Claims	2			
Quiz No. 2 The Conclusion Follows the Premises: Valid Argument, Strong and Weak Arguments.	2			
Strong and Valid Arguments Repairing Arguments: Introduction, The Principle of Rational Discussion	2			
The Guide to Repairing Arguments and Relevance	2			
Quiz No. 3				
Second Midterm Exam	2		Final Examination	3
Total	22		Total	31
Course Requirements			Time Allocation	
1. Quizzes	8		Hours Needed for Lecture and Exams	53
2. Homework/Reports	10		Passing Grade: Between 59 and 60	
3. Midterm Exams	30			
4. Projects	10			
5. Attendance	2			
6. Final Exam	40			
Total	100			

3. Project Workshop in Critical Thinking Course

In this workshop, learners may not be confident about their English, or may think that drama is just fun and games. As teachers the main aim of this module is to develop students' language skills, making arguments and reasoning skills – not produce actors or actresses. For this reason, there is a need carefully structure the lessons so that students have clear linguistic and skills-development aims, and to communicate these aims clearly to students so that are clear on what is expected of them.

3.1. Demonstration 1

This demonstration shows a generic structure for a lesson should contain a focus on aims and expectations, warm up activities which target language as well as performance aims, a context – such as a story – within which to develop the drama, a range of drama conventions which focus on skills such as character building, expressing emotion through voice and movement and, of course, creativity and confidence with language shown in Table 2 and 3. Lessons, or series of lessons, should provide opportunities for architecture students to reflect on their progress

Table 2. A Structured Drama Class (1-3)

No.	Activities	Materials	Aims	Procedures
1	Fixing space	Not applicable	(a) To encourage learner autonomy and responsibility. (b) To ensure students have a defined work area	1. Set up groups and assign performance space.
2	Warm-Up	1 set of word cards / 4 or 5 students	(a) To introduce and provide practice with key vocabulary. (b) To develop range of expression through movement and encourage collaboration and cooperation.	1. Students work in groups of 5 or 6 members, the word cards are face down. 2. One student selects a card and sculpts their partner to form the object. 3. They could use sound effects and movement as well. 4. The rest of the group watch and try to guess the correct word on the card.
3	Using Stimuli	1 set of picture cards / 4 or 5 students	(a) To explain all words in the last activity relate to a true story about a teacher. .	1. In groups, students orally create a basic story in groups, using the pictures and tell to the class. 2. Check the ideas by re-ordering the pictures and words on the board and ask other groups to say if their story is the same or different.

Table 3. A Structured Drama Class (4-7)

No.	Activities	Materials	Aims	Procedures
4	Voice work	Sentence word cards (jumbled order on the board)	(a) To develop range and control of pronunciation. (b) To learn about the effect of voice on creating a character. (c) To introduce a system of notation to learners for further voice work.	1. Students work in pairs to decide how to say the sentence. 2. They annotate their script, using the conventions above. 3. In open class, students deliver their lines and talk to the class about how each one sounds, <i>e.g.</i> , high or low pitch, stressed words, speed, <i>etc.</i>
5	Sound collage	Sound system/amplifier	(a) To provide opportunities for creativity, suitable to mixed level groups. (b) To emphasize the importance of sound effects in creating drama.	1. Groups perform their sound collage. 2. Other students listen and identify the sounds they hear and tick the sounds they hear on their lists

6	Bodyscaping	Developing your character – questions (1 per student)	(a)To practice forming and responding to a range of questions in writing. (b)To focus students on characterization and prepare them for performance.	1. The teacher prepares students to create a short performance of the scene. 2. Individually, students think about the character they are playing. 3. The students require to write 2 or 3 other questions and to answer them about their character.
7	Freeze / Unfreeze and thought tracking	Question on the board (as a prompt for students during the thought tracking task)	(a)To develop a short, group performance that enables students to freely practice the concepts and techniques covered in the lesson. (b)To provide practice in self-direction and develop confidence	1. Groups perform their short scenes. 2. Teacher and students freeze and unfreeze the action as necessary. 3. Performers are questioned on their character and motivation (relating to the questions set in the previous stage).

3.1. Demonstration 2

This demonstration shows the process of moving from story to script and determine how a number of different performance-based activities could be incorporated into lessons shown in Table 4. The EDB scheme of work offers many options for teachers in terms of the type of performance-based work they do within the drama module. Schools could, for example, adapt their class reader or use a prepared script that students can then personalize by editing and adding. Key drama skills developed in this process involve characterization and staging conventions. In the workshop, architecture students worked through a series of tasks which focused on these skills, while still being focused on language skills development.

Table 4. Lesson Plans and Resources

No.	Lesson	Materials	Procedures
1	Introducing the story	Question handout (1 per pair), A3 paper for role-on-the-wall	<ul style="list-style-type: none"> ·1.Students work in pairs and they answer a series of questions on their handouts about the character of Kate. ·2. Read the instructions for the task. ·3. Groups create an outline for their character and write in the information using color, <i>etc.</i> ·4. Characters are published – groups look at each other’s characters and answer some questions (<i>e.g.</i>, Which version of Kate would you most like to have as a teacher? Which one do you think is funniest? Most strict or serious?)
2	Good angel / Bad angel (Character	Handout (1 per student) – Good angel / Bad angel	<ul style="list-style-type: none"> 1. Students explore another character and do some simple performance / vocal warm ups. 2. Teacher introduces the activity and guides

	Henry)		students with language. 3. In groups of three, students play good angel / bad angel and the teacher monitors, and helps with language.
3	Developing awareness of plot structures	Matching cards (1 set / group or 3 or 4), answer cards, A3 paper and pens	1. In pairs, students match different plots types to their definitions. 2. The teacher check answers using the large cards and clarifies as necessary. 3. Students make a 'poster' with examples of each of the plot types and decide the type of plot of the story
4	Planning and writing the script	Handout – Focus on plot structures	1. The teacher introduces the plot graph. 2. Students divide the story up into scenes and write these on their graphs. They note the main action in each scene. 3. Students make a list of the main characters in each scene. They write these on their handout. 4. The teacher introduces the next activity by eliciting language for how the characters feel during each scene. 5. Students continue making a list of adjectives to describe the feelings of the characters at different points in the story.

4. Discussion Factors Affecting Plot and Script Development

4.1. Developing Stories

A number of human situations can be worked out through drama. Each of the following situations involves either a critical moment that the drama hinges on, a process of being in one state and becoming another, or making connections between people, events or things: self-discovery or the discovery of knowledge, achieving a goal through hard work, luck or influence, being tested (truth, temptation), getting to know someone or something encountering the unfamiliar, experiencing a connection with the world around us: animals, nature, facing a dilemma and choosing a course of action, being caught in the act of doing something wrong, keeping or breaking promises/trust, escaping from difficult circumstances, persuading someone to do something, taking revenge or resisting taking revenge, facing the same problem and tackling it in different ways and maturing as a result of going through a difficult experience.

4.2. Theme

Many teachers find that a problem that is familiar can be worked out well in a drama class. Themes that might resonate with your class include the following: family relationships and pressure, leaving home, competing demands at school, cheating, bullying, the pressure to smoke, the pressure to conform fashion, language, possessions, the need for a boyfriend/girlfriend and, the origins or effects of guilt, pride and greed.

Alternatively, teachers might want to focus on social issues with wider themes, such as: poverty vs. wealth, racism / ageism / sexism, crime, mental health and illness, teenage pregnancy, divorce, the effects of war, the effects of mass media messages/perspectives, the extent of the portrayal of violence in society and its effects and, the treatment of animals.

4.3. Plot Structure

Plot structure is the term used to refer to what action takes place in the story which hooks and keeps the audience interested. Many stories are as drama on TV, read or listen as plays follow familiar structures. The most common and easily accessible plot structure is Freytag's, which when written as a diagram, is like an upside down 'V'. In the simplest terms, it contains some or all of the following sequence: setting and context. an event that starts the action (called 'dramatic hook' or 'complicating action'), pursuit of action, development of character, crisis and resolution.

4.4. Creating Dialogue

Plot structure is the term we use to refer to what action takes place in the story which hooks and keeps the audience interested. Many stories are as drama on TV, read or listen as plays follow familiar structures. The most common and easily accessible plot structure is Freytag's, which when written as a diagram, is like an upside down 'V'. In the simplest terms, it contains some or all of the following sequence: setting and context. an event that starts the action (called 'dramatic hook' or 'complicating action'), pursuit of action, development of character, crisis and resolution.

Dialogue has four key functions. It creates the context of the play; establishes and maintains the theme; reveals and shows development in character, and is used to advance the component parts of plot. Key guidelines to bear in mind when helping students to write dialogue are: the motivation and aims of the characters, the relationships that are formed and developed. the conflicts and struggles that are created and resolved, the relationship with the audience (builds & maintains or breaks the fourth wall)

To achieve this relationship to best effect, the following techniques can be used: (1) Establish and find synonyms for important words and themes and make them appear in the dialogue of different characters, for example, one character may refer to his grandmother with a negative word, and another with a positive word, but the character of the grandmother is present and maintained between them. (2) Simplify speeches by restricting each speech to one key idea. (3) Develop ideas by using more than one character, *e.g.*, use the main character (the protagonist) and his opponent (the antagonist), or the main character and a support character with different but not opposing traits (a foil). (4) There is a traditional rule of three in drama writing. This is interpreted in different ways, but can be used as a rule to state and re-state important information in the play. For example, a character may be warned in three different ways not to pursue a course of action. (5) For the purposes of emphasis, when stating names, put them at the beginning or the end of the line. When introducing new information, especially references to key events or objects in a play, place it at the end of line. (6) Ensure that the last line before a character leaves the stage in each scene (the exit line) is memorable. Ways to do this are to (a) summarize an overall feeling about what has happened in the scene; (b) make a hint about what is to happen in the forthcoming scene; (c) make reference to someone's response to events.

4.5. Blocking

Blocking is the word we give to the stage directions; where the actors must stand/sit; which direction they should face; how they should move across the stage or set. Blocking is an important consideration as the audience needs to maintain its sight of events and action. Blocking is a feature of the play that is worked out in performance, but script writing should always include reference to the stage set, and give some idea of where the actors enter and exit.

5. Conclusion

The adoption of the strategies and styles of using English drama in Critical Thinking course benefited the students in that they learned more, faster, and better, were able to apply what they learned in class in working on their class activities, and became better and more creative to use abstract ideas in interpreting information, consider diverse points of view, reach well-reasoned conclusions, and test them against relevant criteria and standards.

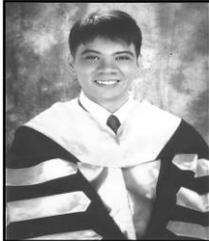
For a great many teachers, not to say students, it is an untried method of expression rarely used in education although extremely familiar through film, radio, television and theatre as it is through life itself. Drama teaching can bear witness to its unique quality of integration, of holism, of communication and of a warm humanity which can elevate the learning of a language from a series of techniques to an understanding which embraces at once the language, its cultural setting and the emotions and values of the student. Drama accomplishes many current trends of modern teaching. One of them is to take away attention from the teacher and give space to the learners instead who can direct their own learning and learn how to be autonomous. Dramatizing is learner-centered so that teacher can use it to contrast with the more teacher-centered parts of the lesson

References

- [1] "The Internet TESL Journal", vol. 16, no. 1, (2010) January, Retrieved from <http://iteslj.org/>.
- [2] T.U. Ganiron Jr., "Applications of Accelerated Learning in Teaching Environmental Control System in Qassim University", International Journal of Education and Learning, vol. 2, no. 2, (2013), pp. 27-38.
- [3] T. Ganiron Jr., "Accelerated Learning Techniques: Teaching Critical Thinking in Qassim University", Journal of Proceedings of the 41st Annual Conference of the European Society for Engineering Education, (2013) September 16, Leuven, Belgium.
- [4] P. Känkänen and M. Bardy, "Life Stories and Arts in Child Welfare: Enriching Communication", Nordic Social Work Research, (2013), pp. 1-15.
- [5] B. McGuire, "Student Handbook for Drama", Pearson, (2003).
- [6] J. Neelands and T. Goode, "Structuring Drama Work", CUP, (2000).
- [7] T. U. Ganiron Jr., "The Effect of Study Group Activity Guide in Expository Reading and Writing Course at the College of Architecture in Qassim University", International Journal of Education and Learning, vol. 3, no. 1, (2014) March, pp. 23-34.
- [8] A. Mok, "Task-based Learning, Language Arts and the Media. A Resource Book for Secondary English Teachers INSTEP", Faculty of Education, HKU, (2001).
- [9] N. Gulalkari, "Writer Adaptation for Handwriting Recognition in Hindi Language—A Survey", International Journal, (2014).
- [10] L. Křivková, "Design of the Workshop: How to use Drama in an English Language Class? Undergraduate Thesis", Department of English Language and Literature, Masaryk University, (2011).
- [11] T. U. Ganiron Jr., "Planning and Execution of Holistic Model Using Object Oriented Technology", Proceedings of the 3rd International Conference The Future Education, (2013) June 7, Florence, Italy.
- [12] T. Ucol-Ganiron Jr., "Student Competencies in Structural Engineering: Modelling Cultural Environment in Qassim University", Journal of Proceedings of the 40th Annual Conference of the European Society for Engineering Education, (2012) September 23-26, Thessaloniki, Greece.
- [13] T. Ucol-Ganiron Jr., and A. Alaboodi, "Cultural Learning Environment in Structural Engineering Courses of Architecture and Civil Engineering Students in Qassim University", Procedia-Social and Behavioral Sciences, vol. 102, (2013), pp. 300-310.
- [14] T. Ucol-Ganiron Jr., A. Alaboodi and A. Eltoumi, "Designing and Developing a Web Enhanced Project Management Course for Engineering Graduating Students", Journal of Proceedings of the International Forum on Engineering Education, (2010) November 23-25, University of Sharjah, United Arab Emirates.
- [15] T. Ucol-Ganiron Jr., "Web-Enhanced Project Management Course", International Journal of u- and e- Service, Science and Technology, vol. 6, no. 1, (2013), pp. 49-59.

- [16] T. Ucol-Ganiron Jr., “Cultural Learning Environment and Perception of Structural Engineering Classes in Qassim University”, WSEAS Transactions on Advances in Engineering Education Journal, vol. 9, no. 3, (2012), pp. 84-93.
- [17] T. Ganiron Jr., T. Ganiron and N. Ucol-Ganiron, “Modeling the Level of Objective & Subjective Career Success of Civil Engineers Towards Developing a Career Planning Program”, International Proceedings of Computer Science & Information Technology, vol. 45, (2012), pp. 36-41.
- [18] A. P. Rainio and A. M. Shane “From Ambivalence to Agency: Becoming an Author, an Actor and a Hero in a Drama Workshop”, Learning, Culture and Social Interaction vol. 2, no. 2, (2013), pp. 111-125.

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