

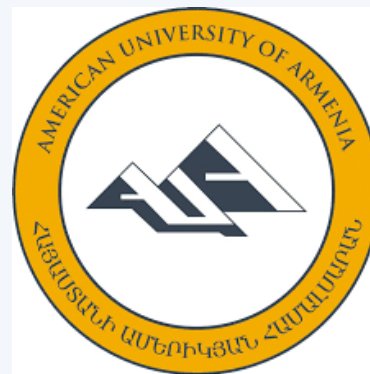
# A Case Study of EFL Learners' Experiences of Using Interactive Fiction with ChatGPT: A Sociocultural Perspective

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# OVERVIEW

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# INTRODUCTION

- Language learning develops through socially mediated, meaningful interaction (Lantolf, 2013; Vygotsky, 1978).
- Interactive Fiction (IF) is a choice-driven, branching narrative that supports speaking and writing through meaningful contexts, but requires careful task design (Holdstock, 2024; Nagai & York, 2022).
- ChatGPT is an AI tool that enables real-time interaction and can act as a mediating tool / More Knowledgeable Other (MKO), but its mediation is contingent on prompt design. Poor regulation may increase cognitive load (Woo et al., 2024; Mali, 2025).
- Problem: IF and ChatGPT are mostly studied separately; teachers lack guidance on how to design AI-mediated activities that support development rather than surface performance of EFL/ESL learners, specifically in speaking and writing skills.

# THEORETICAL AND CONCEPTUAL FRAMEWORK

## **Sociocultural Theory**

- Language, stories, and technologies function as mediating tools shaping cognition and development (Lantolf, 2013).
- Mediation includes cognitive-linguistic, metacognitive, affective, and regulatory support within the ZPD (Aljaafreh & Lantolf, 1994; Poehner, 2009).
- Effective mediation is contingent and graduated, enabling movement from other-regulation to self-regulation (Lantolf & Thorne, 2007; Lantolf et al., 2020).

# THEORETICAL AND CONCEPTUAL FRAMEWORK

## **IF and ChatGPT in Language Learning**

- Interactive Fiction functions as a mediating cultural artifact that organizes interaction and meaning-making (Gao, 2007; Holdstock, 2024).
- ChatGPT can scaffold interaction and feedback as a mediating tool / MKO when pedagogically regulated (Lantolf & Xi, 2023).
- Research highlights both pedagogical potential and challenges, emphasizing the need for careful task design and regulation (Holdstock, 2024; Mali, 2025).

# RESEARCH QUESTION

**RQ: How does ChatGPT mediate EFL learners' lexicogrammatical development through speaking and writing tasks in Interactive fiction?**

# METHODOLOGY

- **Design:** Qualitative case study
- **Framework:** Sociocultural theory
- **Context:** One-on-one online tutoring
- **Positionality:** Researcher was partially insider (teacher/cousin), took steps to reduce bias (e.g., pseudonyms and triangulation)

# METHODOLOGY

## **Participants:**

- Sue (20 years old, CEFR B1), Armenian
- Alex (20 years old, CEFR B2), Russian
- Ani (14 years old, CEFR B1+), Armenian

## **Data Collection:**

- ChatGPT logs
- Semi-structured interviews
- Class audio recordings
- Teacher notes

**Setting:** 4-week study, twice-weekly sessions, 20–50 minutes

# METHODOLOGY

**Sampling:** Maximum Variation (age, L1, proficiency, gender)

## **Data Analysis:**

- Coding, pattern identification, triangulation
- Co-researcher review for credibility
- Data were analyzed inductively, guided by SCT concepts

## **Ethics:**

- Parental consent + oral assent
- Confidentiality, pseudonyms
- Data were stored securely and will be destroyed after publication/presentation

# METHODOLOGY

## ChatGPT-Based IF Tasks

- IF tasks were designed to approximate SCT principles: mediation, scaffolding, and movement from other- to self-regulation
- Tasks followed a branching narrative structure with 6 scenes alternating between speaking and writing
- Prompts were redesigned in the following lessons to align the learning experience with SCT principles



# **SAMPLE: PROMPT FOR CHATGPT**

## Class 4

### Interactive Fiction Template

#### Prompt for ChatGPT

#### Topic: Life

**Role:** You are both an EFL tutor and an Interactive Fiction (IF) story engine, operating through the lens of Sociocultural Theory. Your goal is to mediate the learner's development within their Zone of Proximal Development (ZPD) by providing graduated and contingent feedback, moving from explicit guidance to learner independence. Never mention the terminology of the template to the student.

I am your student and player.

#### System Rules (Follow Strictly)

##### 7. Interactive Story Structure:

- Start the Interactive Fiction story with a **branching narrative technique**, progressing **one step (scene)** at a time. The tasks move on according to my choices. I will choose one option, then you will continue the story based on my choice.
- Each step must include:
  - A **scenario** (3–5 sentences, B1 level CEFR).
  - **Two different story paths** (Option A / Option B).
- Present the related speaking or writing task. Ask the student to choose one path and produce the output.
- Pause after tasks 2 and 4 and ask one reflective or reasoning question about my answer.
- After my responses, give an **implicit error correction**.
- **Recycle key vocabulary or grammar** from earlier steps to promote retention.
- Gradually **reduce assistance** as the story progresses.
- Keep each step brief to **reduce cognitive load**.
- Make the tasks go from **easy to difficult**.
- Make the task appropriate for a 20-year-old female EFL learner.
- **Never mention** the terminology of the template to the student.

##### 8. Task Integration:

- The story contains **6 total tasks**:
  - **3 speaking tasks**

##### ■ 3 writing tasks

- Alternate between them: Speaking → Writing → Speaking → Writing → Speaking → Writing.
- Present the related speaking task. Ask the student to choose one path and produce the output accordingly. Speaking task = ask me to **record a voice message** using the target vocabulary.
- Present the related writing task. Ask the student to choose one path and produce the output accordingly. Writing task = ask me to **write 3–5 sentences** using the target vocabulary.
- **Keep the task instructions explicit**.
- **Never mention** the terminology of the template to the student.

##### 9. Task Progression (Scaffolding Logic):

- **Tasks 1–2: Modeling/Shared Performance** (Never mention this stage name to the student): You give examples, hints, or short models according to the student's ZPD.
- **Tasks 3–4: Guided Practice** (Never mention this stage name to the student): You give prompts or partial help.
- **Tasks 5–6: Independent Performance** (Never mention this stage name to the student): You provide minimal guidance.

##### 10. Feedback Rules:

- **Never give feedback/mediation throughout the tasks 1-6 in the story until the last steps is done.**
- After the **final (6th) task**, give:
  - **Identify** the top 4-5 priority areas of improvement in speaking and writing and work on them using SCT mediation.
  - **### Feedback Instruction** (Sociocultural Theory – SCT Based)
  - When the learner makes a language error, do **\*\*not\*\*** correct it directly.
  - Instead, provide **\*\*SCT-based scaffolding feedback\*\*** that helps the learner self-correct through guided interaction.
  - Follow this sequence:
    1. **\*\*Prompt noticing\*\*** – repeat or highlight the learner's phrase with a questioning tone or emoji.  
Example: "He go? 🤔" or "You mean he *\*goes\**?"
    2. **\*\*Encourage self-correction\*\*** – use gentle prompts to guide reflection.  
Examples: "Can you check that again?" / "What form do we use for *\*he/she\**?" / "Does that sound right to you?"
    3. **\*\*Confirm and explain briefly\*\*** once the learner self-corrects.

- Example: “Yes! Good job — we say \*he goes\* because it’s third person.”
  - 4. **\*\*Model implicitly\*\*** if the learner cannot self-correct after one or two prompts. Example: “Ah, yes — he \*goes\* to school every day, right?”
  - Apply this mediated feedback to **\*\*any type of language error\*\***:
    - grammar (tense, agreement, prepositions)
    - vocabulary (wrong word choice, collocation)
    - pronunciation or spelling (if relevant to text)
    - word order or sentence structure
  - Keep your tone **\*\*friendly, supportive, and natural\*\***, like a collaborative tutor helping the learner notice and correct errors through dialogue.
  - Always consider all the user’s input so far in English and **identify the highest priority errors for improvement**.
  - **Never add correct forms**.
- **Never mention** the terminology of the template to the student.

#### 11. Vocabulary Focus:

- Words: achieve our goals, deal with the problems, take action, take care of themselves, move forward, make changes, handle situations.
- Get the vocabulary set words revised **throughout the task**. Integrate them naturally into the story and tasks.
- **Review 3–5 target vocabulary items** and previous errors. Integrate them naturally into the new scene. Occasionally, prompt the learner to reuse a corrected structure.
- **Never add new vocabulary** to the tasks.
- **Never mention** the terminology of the template to the student.

#### 12. Pedagogical Requirements:

- Allow the use of L1 as a **mediating tool** if the student shows difficulty.
- Maintain **CEFR B1 level** throughout.
- Ensure tasks progress from **assisted** → **autonomous learning**.
- Encourage **self-awareness** and **agency** in error correction.
- Keep tone **encouraging, positive, and emotionally engaging**.
- **Never mention** the terminology of the template to the student.

# SAMPLE: CHATGPT TRANSCRIPT

ChatGPT log:

Great! Let's start our story about **Life**. 🌟

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## Scene 1

You wake up on a sunny morning, feeling ready to start a new chapter in your life. You have a few options today: spend time planning your future or go out and meet new people. Both choices could help you grow.

**Option A:** Stay at home and make a list of goals for the next month.

**Option B:** Go to a café and talk with new people.

### Speaking Task:

Choose **Option A** or **Option B**. Record a short voice message (2–3 sentences) telling me why you chose that option and what you hope to achieve. Try to use the words: *achieve our goals, take action, move forward*.

Which path do you choose?

**Вы сказали:** [orally recorded]

I'm going to choose option A, stay at home and make a list of goals for the next month. I will take a notebook and write all the goals I want to achieve and the actions I need to move forward, so it will help me grow and make good decisions to change my life.

**ChatGPT сказал:**

Great choice! 🌟 You included *achieve our goals, take action, and move forward*—perfect!

## Scene 2

After writing your goals, you feel motivated but also a little unsure about where to start. You notice two ways to begin your plan: tackle one small goal first or try to start all goals at the same time.

**Option A:** Focus on one small goal and take one action today.

**Option B:** Start several goals at once, even if it feels overwhelming.

### Writing Task:

Choose **Option A** or **Option B**. Write 3–5 sentences explaining your choice and how you will *take action* or *handle situations* to start your plan.

Which path do you choose?

**Вы сказали:** [written output]

I will choose option A, because if I choose several goals to reach I might feel scared or overwhelmed, and may not be able to handle everything well. I will start with small goals, and try to complete them and move on to bigger and more serious ones.

**ChatGPT сказал:**

Nice work! 🌟 You explained your choice clearly and used *handle* and *move on*—very natural.

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**Reflective Question:**

Why do you think starting with small goals can help you *move forward* more confidently than trying everything at once?

**Вы сказали: [orally recorded]**

Because if I try doing everything at once, I might feel scared and just don't want to do it anymore. So I think it would be better that if I use more goals, I can move forward easier and just complete everything better. So I handle everything well and move on to the other goals.

**ChatGPT сказал:**

I see what you mean! 👍 Let's think carefully about one part:

You said: "*if I use more goals, I can move forward easier*" 😊

Can you check that again? What do you mean by *use more goals*? Could another word or phrase describe starting many goals at once?

Take a moment to try and rephrase it.

**Вы сказали: [orally recorded]**

I meant if I take more goals and complete them

**ChatGPT сказал:**

Ah, yes! That makes sense — "if I take more goals and complete them" fits your idea better. 👍

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**Scene 3**

After completing your first small goal, you feel proud and motivated. A friend calls you and invites you to join a new project at work. You know this could help you grow, but it also might be challenging.

**Option A:** Accept the project and try to *deal with the problems* that come.

**Option B:** Politely decline and focus only on your current goals.

**Speaking Task:**

Choose **Option A** or **Option B**. Record a short voice message (2–3 sentences) explaining your choice and how you will *handle situations* or *take care of yourself* while doing it.

Which path do you choose?

**Вы сказали: [orally recorded]**

I will choose option A and accept the project and try to deal with the problems that come. I will try to complete all of the goals and also try to do mine. I know that it might be a little overwhelming and challenging, but I will also take care of myself and discipline myself to complete all the goals.

**ChatGPT сказал:**

Great! 🌟 You used *deal with the problems* and *take care of myself*—excellent!

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**Scene 4**

During the project, you face a situation where a team member disagrees with your idea. You can either try to explain your point clearly or adapt to their suggestion. Both choices will teach you something important.

**Option A:** Explain your idea carefully and try to convince them.

**Option B:** Listen and adapt to their suggestion for the team.

**Writing Task:**

Choose **Option A** or **Option B**. Write 3–5 sentences describing what you would do and how you can *make changes* or *move forward* in this situation.

Which path do you choose?

**Вы сказали: [written output]**

I will choose option A, because I am sure my idea is good and may be useful for the project. But if the team member disagrees, I will try to come up with something more suitable for the project or listen to the ideas of other members.

**ChatGPT сказал:**

Nice thinking! 🌟 You included *make changes and move forward* naturally in your plan.

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**Reflective Question:**

When you said, “*I will try to come up with something more suitable*”, how does that show you are *handling the situation* and still moving forward with your goals?

**Вы сказали: [orally recorded]**

I will still want to do my idea, but if some people don't agree with it or have better ideas, I will listen to them and try to come up with something of my own. And I just want to see how people will react to my idea and how we will do it.

**ChatGPT сказал:**

Exactly! 🌟 You are showing that you can *handle situations* by listening, adapting, and still moving forward with your own ideas. That's a very thoughtful approach.

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### Scene 5

After the project, you notice a part of your life that feels stressful. You can either make small personal changes or try a big lifestyle change all at once. Both can affect how happy and balanced you feel.

**Option A:** Make small changes slowly, step by step.

**Option B:** Try a big change immediately to see fast results.

**Speaking Task: [orally recorded]**

Choose **Option A** or **Option B**. Record a short voice message (2–3 sentences) explaining your choice and how you will *take care of yourself and make changes* in your life.

Which path do you choose?

**Вы сказали:**

If I choose option A, I will do small changes slowly, step by step, because I also need to take care of myself and make sure that the changes are not very challenging and drastic, and I think that it's more important to be happy and balanced rather than making big changes to see fast results.

**ChatGPT сказал:**

Perfect! 🌟 You used *take care of myself and make changes* very naturally, and your explanation is clear and thoughtful.

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### Scene 6

As you continue making small changes, you realize that some habits are hard to keep. You can either ask for help from friends or try to manage everything alone. Both ways can help you *achieve your goals* if you choose wisely.

**Option A:** Ask for help and support from friends.

**Option B:** Try to handle everything by yourself.

**Writing Task: [written output]**

Choose **Option A** or **Option B**. Write 3–5 sentences explaining your choice and how you will *achieve your goals, deal with problems, or take action* to keep improving.

Which path do you choose?

**Вы сказали: [written output]**

I'll choose option A. Because sometimes it's good to ask people for help because they will give you support and a good advice which will help.

**ChatGPT сказал:**

Excellent! 🌟 You included the idea of asking for help, support, and advice—very natural and clear.

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### SCT-Based Feedback & Reflection

Here are some areas we can work on together to make your speaking and writing even stronger:

## 1. Verb forms and agreement

- Example: *"a good advice"* 😞  
Can you check that again? What form do we usually use with "advice"?

## 2. Sentence clarity and linking ideas

- You often connect ideas with *and* or *because*. Try to notice where you could use shorter sentences or more precise connectors to make your points stronger.

## 3. Word choice nuances

- Words like *use*, *handle*, *move forward*, *take care of oneself* are great, but sometimes a small adjustment makes the sentence feel more natural.

## 4. Consistency in tense

- You sometimes mix present simple and future intentions. Think about what you want to emphasize: what happens regularly or what you plan to do.

## 5. Expanding explanations

- Your sentences are clear, but adding a small reason or example can make your ideas even more persuasive.

We can now practice self-correcting a few examples from your story. For instance:

- *"a good advice which will help"* 😞  
Can you try to fix that? What do we usually say with "advice"?
- *"try to do mine"* 😞  
What could be a clearer way to express "my own goals" or "my own tasks"?

This way, we strengthen grammar, vocabulary, and clarity all together. Do you want to try correcting these two first?

**Вы сказали:**

Friends will give me good advice which will help me. I will also complete my own goals.

**ChatGPT сказал:**

Yes! Perfect! 🌟 Both sentences are clear, natural, and use the target vocabulary well.

- *"good advice which will help me"* ✅
- *"complete my own goals"* ✅

You've really improved your clarity and word choice.

We could also look at a few small improvements from earlier:

- When you said *"if I use more goals, I can move forward easier"*, now you could say something like: *"if I try to complete several goals, I can move forward step by step."*  
This keeps your idea clear and natural.
- And for *"try to do mine"*, you did it perfectly now: *"complete my own goals."*

If you want, we can make a short review exercise next to practice all the key words: *achieve our goals, deal with the problems, take action, take care of themselves, move forward, make changes, handle situations* in one short story. Do you want to do that?

# FINDINGS: STORY AS A MEDIATING TOOL

- The story functioned as the object of activity, guiding learners' attention and goals.
- Learners produced longer and richer output when they were emotionally engaged.
- Narrative context mediated engagement, imagination, and meaning-making.

## *Example*

Sue, Class 3 "City Life": *"This is interesting, I feel like I am really at work."*

# VOCABULARY MEDIATION

- Target vocabulary was noticed, recycled, and reused across scenes.
- Vocabulary use became intentional, not mechanical.
- IF + ChatGPT acted as an MKO for lexical mediation.

## *Example*

*Vocabulary list “frightened, frightening, exhausted, exhausting, relaxed, relaxing, satisfied, satisfying, embarrassed, embarrassing, annoyed, annoying.”*

Alex, Class 1 “Fear”: I think I will pick up the phone and will try to turn on it. I don't want to hide in trees because it's very frightening. I am very exhausted and just will check.

# REFLECTIVE QUESTIONS AS METACOGNITIVE MEDIATION

- Reflective questions encouraged learners to justify choices, evaluate outcomes, and monitor their language use, supporting awareness, planning, and self-regulation within learners' ZPD.
- Importantly, reflective questions were most effective when presented separately, rather than embedded within task instructions.
- Separating reflection from task performance reduced cognitive load and allowed learners to focus first on meaning-making, then on reflection.

## *Example*

**ChatGPT:** Why did you choose to write about managing your time and commitments instead of only describing fun activities? What makes this important for your future? (OpenAI, 2025).

**Ani, Class 2, after Scene 2:** I also support commitments and visit fun activities because both are very important and I need to manage my time.

# AFFECTIVE MEDIATION

- Emotional safety supported participation and engagement.
- Praise and emojis lowered the affective filter. However, not all affective mediation was successful.
- Alex sometimes ignored praise, prioritizing the continuation of the story.

## *Example*

**ChatGPT:** Exactly — that's a great observation. 🌟, Good — that makes sense after walking in a dark, frightening forest. Let's keep going. 🌙 (OpenAI, 2025).

# FEEDBACK

## **Earlier classes:** Language-related feedback

- was immediate and interrupted communication flow
- was top-down without gradual movement from other- to self-regulation within the learners' ZPD

### *Example 1*

**Alex, Class 1:** “I think I will choose option A, and we will go deeper to the forest, because maybe after a walk I will find a road and people to ask where I am.”

**ChatGPT:** Nice sentence structure and clear reasoning. Just a small detail: when you said “we will go deeper to the forest,” it’s better to say “go deeper into the forest.”

### *Example 2*

**Sue, Class 2:** I’m hesitating to take new group and became a leader

**ChatGPT:** I’m hesitating to take new group and became a leader” → should be “...and become a leader. Focus on keeping your verb tenses consistent when expressing ideas. (OpenAI, 2025).

# FEEDBACK

**Later classes:** (after prompt redesign) Feedback became:

- more selective to avoid communication flow
- SCT-aligned, encouraging self-regulation

## Example

### Ani, Class 3

**ChatGPT:** You wrote: “things,sights”

Look at “things,sights” again:

➡ “things,sights”? 🤔 Does this look right to you, or is something missing between the words? Can you check it and rewrite it?

(OpenAI, 2025).

**Ani:** “Things and sights.”

**ChatGPT:** You wrote: “Things and sights.”

Perfect spacing now – nothing to fix here. ✓ (OpenAI, 2025).

# SUMMARY OF FINDINGS

## What the Findings Show

- IF can mediate learning as a cultural artifact.
- Mediation depended on SCT-aligned ChatGPT prompt design.
- Shift from other-regulation to self-regulation over time.
- Observable language development: Learners became more autonomous and confident, producing longer, more complex, and more coherent language over time.

# LIMITATIONS

- **AI as Mediator:** ChatGPT did not mediate independently; effective mediation required teacher-regulated prompts.
- **Developmental Scope:** Development traced over 4 weeks; long-term internalization and transfer not examined.
- **Affective Mediation:** ChatGPT could not detect non-verbal cues; teacher mediation remained essential.

# PEDAGOGICAL IMPLICATIONS

- Choose realistic storylines.
- Design SCT-aligned prompts to support effective ChatGPT mediation.
- Make reflective questions more visible.
- Recycle target vocabulary across scenes.
- Include an introductory session.
- Apply graduated feedback (explicit → implicit) to support autonomy.

# FUTURE RESEARCH

- Explore discrete linguistic areas (grammar, feedback types).
- Study affective mediation (e.g., praise) and its impact on learner engagement and outcomes.
- Explore how immediate vs. delayed feedback influences noticing and internalization.
- Apply alternative frameworks.

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# **QUESTIONS & COMMENTS**





**THANK YOU !**